Trio

WORD PROCESSOR

SPREAD SHEET

DATA BASE

INTEGRATED 100%

SOFTSYNC, INC.®

TRIO

THE INTEGRATED

- WORD PROCESSOR
- SPREADSHEET
- DATA BASE

DESIGNED BY
KEN CURRIER

WRITTEN BY
RUDOLPH DANIEL
AL LAITY
PETER ULRICH

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TABLE OF CONTENTS

INTRODUCTION..... 1
LOADING TRIO..... 3

SECTION I: TRIO WORD

QUICK START..... 5
INSTRUCTIONS..... 7
- Screen Display..... 8
- Commands..... 10
- Scroll..... 11
- Erase..... 11
- Change Colors..... 12
- Save..... 13
- Load..... 14
- Help..... 15
- Insert Mode..... 18
- Cursor Keys..... 19
- Tab Key..... 19
- Control Keys..... 20
- Set Tabs..... 20
- Define Range..... 21
- Moving Text 22
- Insert/Delete Lines..... 24
- Search & Change..... 24
- Disk Commands..... 26
- Linking Your Files..... 28
- The CLIPBOARD & Variable Text..... 30
- Display Document..... 34
- Printing..... 35
- Global Files..... 35
- The Print Command Line..... 37
- Syntax Error Reports..... 42
- Changing Device Numbers..... 42
- Exit TRIO WORD..... 43

TRIO WORD: DEFINITION OF TERMS..... 44

SECTION II: TRIO CALC

QUICK START..... 53
INSTRUCTIONS..... 55
- Loading..... 56
- Moving Around the Sheet..... 57
- Clr/Home Key..... 58
- Making Entries..... 58
- The Value Key..... 59
- The Formula Key..... 61
- The Edit Key..... 63
- Move Cell Contents..... 64
- Mathematical Symbols..... 65
- Building A Sample..... 66
- Entering Text..... 66
- Cell Length 66
- Planning a Layout..... 67
- The Go To Key..... 68
- Style..... 69
- The Copy Command..... 69
- Totaling a Row..... 71
- Copying Formulas..... 72
- Relative & Absolute References..... 73
- Total All Income..... 75
- Entering Expenses..... 76
- Total Expenses..... 77
- Mixing References..... 78
- Mathematical Functions..... 78
- Editing..... 79
- Insert & Delete Spaces..... 80
- Insert Row or Column..... 80
- The Blank Key..... 81
- Creating a Window..... 81
- The Function Keys..... 83
- Disk Maintenance..... 85

TRIO CALC: DEFINITION OF TERMS..... 88

SECTION III: TRIO FILE

QUICK START..... 95
INSTRUCTIONS..... 96
Loading..... 97
Creating Your Own Form..... 98
Accessing a File..... 100
Adding Files..... 100
Edit Records..... 101
Sort and Modify..... 102
Change Colors..... 103
Search Files..... 103
Primary & Secondary Search..... 104
Print Files..... 105
The Help Screens..... 106
TRIO FILE: DEFINITION OF TERMS..... 107

INTEGRATING TRIO WORD & FILE..... 110
Creating a Form Letter..... 110
Create a Variable..... 115

TRIO
INTRODUCTION

Trio is made up of three powerful programs - a word processor, a financial spreadsheet and a data manager- all of which are designed to work together.

As a word processor, TRIO will speed up your ability to write letters, reports and other text documents.

As a spreadsheet, TRIO will help you analyze and report on a variety of financial scenarios ranging from yearly Income/Expense projections to loan payments.

As a data manager, TRIO will organize your files and make it easy to retrieve information such as phone numbers, mailing lists, inventories, or collections.

However, some written reports require financial documentation. And the same correspondence needs to be personalized but sent to everyone on your mailing lists. Therein lies the power of TRIO.

With TRIO, you can MERGE or INTEGRATE information that you create with any of the three programs. So, if you'd like to include next year's spreadsheet projections in your annual report, TRIO will do it.

If you'd like to send the same letter to all (or some) people on your mailing list and insert personal references into each, TRIO will do it.

These programs individually will make your computer very useful. And in combination with TRIO's INTEGRATION capabilities, your computer is practically irreplaceable.

HOW THE INSTRUCTIONS ARE STRUCTURED

At first glance, it seems as if there is a lot to learn in order to use TRIO. Yet, because each program is simple in design, it's much easier than you would think.

Nevertheless, we have provided plenty of information to make you proficient quickly. And you can skim over those sections whose points you already understand.

EACH PROGRAM EXPLAINED SEPARATELY

This user's manual is divided into three parts: TRIO WORD, TRIO CALC, and TRIO FILE. Each program has its own separate section in which the operation of the program is covered completely. In each section, TRIO's ability to INTEGRATE data is also covered so you'll be able to see how the programs can work together.

TRIO WORD is the pivotal program when it comes to INTEGRATING information. You will want to merge TRIO CALC and TRIO FILE information into TRIO WORD. The program was designed this way because you will probably use TRIO's word processing most often.

Rather than spending time and effort to re-enter information, TRIO makes it possible to merge your existing work together. In TRIO FILE, you will learn how to insert names, addresses and other data base information; in TRIO CALC, you will see how to convert your financial projections or records into files that can be merged right into any TRIO WORD document.

QUICKSTART

The first thing you'll find in the instructions for each program is the "QUICK START" sheet. This contains all the commands used by each program. If you've already had a lot of experience using word processors, data bases and spreadsheets, these instructions may be all you need to use the programs. Once you become familiar with the program, you'll find that the "Quick Start" sheet comes in handy often.

INSTRUCTIONS & SAMPLES

This book also contains step-by step instructions which cover each program. These sections go into great detail as they introduce each function in the same order that you would naturally discover it.

The instuctions for each program contain one main example that you work with during the course of the instructions.

DEFINITIONS

This section defines each function of the program and reviews it briefly.

"Definition of Terms" is arranged alphabetically so that you can flip through it quickly to find out about a specific function.

HELP WINDOWS

In addition to the extensive documentation found in the user's guide, SOFTSYNC provides additional information found in the software itself.

In order to give you immediate access to information, the disk contains "HELP WINDOWS". At any point while using the programs, you can press the HELP (FUNCTION 8) key and a window appears where you can choose a summary of instructions specific to your question. This saves a lot of thumbing through the book when you need a quick answer.

It's worth the time to go through the manual once with the program in the computer. Once you've reviewed each step, you probably can rely on the QUICK START card and the HELP WINDOW for future questions.

LOADING TRIO

Assuming your computer, monitor, disk drive and printer are hooked up, you are ready to proceed. Start with the computer's power off.

Remove the master disk from its protective sleeve and carefully place it, label up, into the disk drive and close the door. The oval shaped slot that exposes the disk itself should go in first. (By the way, that exposed section should never be touched with your fingers because it contains data, and it's very delicate.)

Type LOAD "TRIO", 8, 1 and press the RETURN Key.

The drive will run, the red light will go on, and within 15 seconds you should see the TRIO MENU on screen.

Any of the three programs -- WORD, CALC and FILE -- can be loaded here, simply by pressing the number next to the program name.

IN THE COMPUTER AND ON THE DISK

Whenever you are using TRIO, there are times when information resides in the memory of the computer and other times when it resides on a disk set up to store your information. This is an important distinction because you frequently need to save the data you generate from the computer onto a disk.

When you load TRIO into the computer, the program resides in the memory of the computer. Yet it is still stored on the master disk. Why? Because you instructed the computer to retrieve a COPY of the program from its memory. The original will remain on the master forever, unless you specifically instruct the computer to erase it.

However, when you type a letter using TRIO WORD, the letter resides in the memory of the computer only until you save it to a disk. If you make changes in the letter or erase a portion of it, these changes only exist in the memory of the computer, until they have been saved to disk.

These following instructions will guide you through the important process of creating, editing, storing and retrieving your documents.

TRIO WORD
The Word Processor

QUICK START REFERENCE SHEET

FUNCTION KEYS

F1/F7	-- SCROLL DOCUMENT UP/DOWN
F2	-- ERASE OPTIONS
F3/F4	-- CHANGE TEXT/BACKGROUND COLORS
F5	-- SAVE FILES
F6	-- LOAD FILES
F8	-- HELP SCREENS

CONTROL KEYS (CTRL)

CTRL A	-- INSERT A BLANK LINE
CTRL B	-- ACCESS DATA BASE FILES
CTRL C	-- SEARCH AND CHANGE
CTRL D	-- ACCESS DISK COMMANDS
CTRL F	-- FORMAT TO 40 COLUMN WORD WRAP
CTRL G	-- DELETE A LINE OF TEXT
CTRL I	-- INSERT VARIABLE INTO TEXT
CTRL K	-- KILL A TAB
CTRL M	-- MOVE A BLOCK OF TEXT
CTRL N	-- LINK FILES
CTRL O	-- OPTIONS - CHANGE DEVICE SETTINGS
CTRL P	-- PRINT DOCUMENT
CTRL Q	-- QUIT TRIO WORD
CTRL R	-- DEFINE A RANGE
CTRL S	-- SEARCH TEXT
CTRL T	-- TAB SET
CTRL V	-- NAME VARIABLE
CTRL W	-- PREVIEW TEXT
CTRL X	-- KILL ALL TABS
CTRL Z	-- VARIABLE CLIPBOARD

OTHER KEYS

HOME	-- CURSOR TO TOP AND BOTTOM OF SCREEN
CLR	-- CURSOR TO BEGINNING AND END OF DOCUMENT
INST	-- INSERT SPACE TO RIGHT
DEL	-- DELETE CHARACTER TO LEFT
ARROW UP	-- INSERT MODE
ARROWLEFT	-- TAB
CRSRS	-- MOVES CURSOR IN ARROWS DIRECTIONS
SHIFT	-- UPPER CASE LETTERS
SHIFT LOCK	-- UPPER CASE LOCK

PRINTER COMMANDS

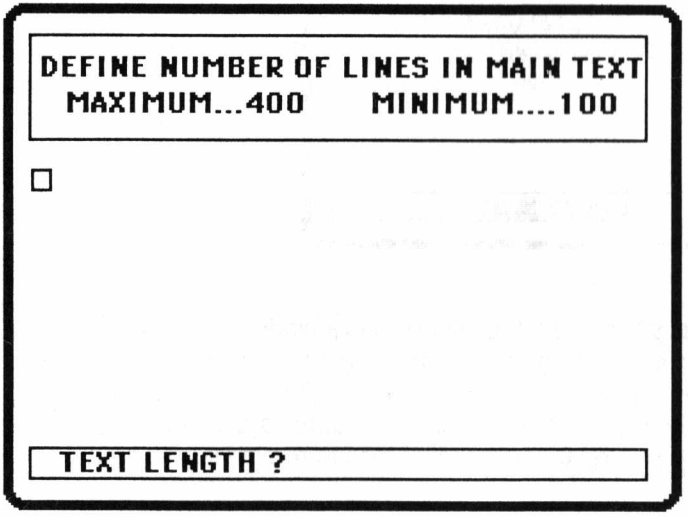
COMMODORE KEY (BOTTOM LEFT):
ACCESS PRINTER COMMAND LINE

(Enter these commands in lower case.)

lm (#)	-- LEFT MARGIN SETTING
rm (#)	-- RIGHT MARGIN SETTING
sp(#)	-- LINE SPACE
pn(#)	-- PAGE NUMBER
pl(#)	-- PAGE LENGTH
pf (#)	-- LINES TO A PAGE
ps(#)	-- START PAGE # @
np (#)	-- BLANK REST OF PAGE
sk (#)	-- SKIP LINES
df	-- DEFINE ASCII CODES
he (" ")	-- NAME HEADER (60 CHARACTERS)
hdo	-- HEADER OFF
hd1	-- PRINT HEADER LEFT
hd2	-- PRINT HEADER CENTERED
hd3	-- PRINT HEADER RIGHT
cn	-- CENTER TEXT
rj	-- RIGHT JUSTIFY TEXT
ju	-- LEFT/RIGHT JUSTIFY
[	-- START UNDERLINE
]	-- STOP UNDERLINE
>	-- START ITALICS
<	-- STOP ITALICS

TRIO WORD:
The Word Processor

When you select TRIO WORD, the program will load and first display a screen which asks you to "Define the Number of Lines in Main Text". Enter the amount in the box at the bottom of the screen. The maximum is 400, and the minimum is 100. For now enter 400. We'll get to why you want to do this shortly.



When you enter the number and press the RETURN key, the screen flashes a couple of times (to let you know something is changing) and the main screen is displayed.

You will see the standard screen as illustrated below . You have your commands at the top of the screen, a "message center" at the bottom, and the typing area in the middle. The top and bottom areas are designed to keep you informed about the program at all times.

```
F1/F7  SCROLL UP/DOWN      F5 SAVE FILE
F2     ERASE OPTIONS       F6 LOAD FILE
F3/F4  CHANGE COLORS       F8 HELP

LINE 001                COLUMN 01
```

As you can see, the top of the screen displays some reminders of options available to you. This section changes from time to time to display new options based on what function you've accessed. For example, if you choose F5: SAVE A FILE, the top section changes to display the SAVE options available to you. When you change modes, the top flashes a few times to remind you a change took place.

The bottom line displays the position of the cursor. It's also used to display both error messages and prompts and to request your response to a prompt.

The center of the screen is your blank piece of paper. You'll be typing here as you normally would do with a typewriter. But, as you'll see shortly, it's not your ordinary Underwood.

Unlike a typewriter, the word processor lets you make the changes you want instantly. If you want the first paragraph to be last or you want to remove the fourth paragraph entirely, the program will accommodate you. It's just a matter of knowing the instructions required to carry out these modifications.

SCREEN DISPLAY

There are a couple of things you should know about the relation of the

screendisplay to your final printed page. Type a few lines of copy just to get a feel of the keys and the screen. You'll notice that as the letters go across the screen, the numbers in the BOX down at the bottom of the screen are changing. They are actually telling you what line your cursor is on and what column it is in.

The screen you are looking at displays 40 characters across. However, when you print your document, you might want 65 characters printed across. The way the paragraphs appear on screen is not the way they will appear on paper. You can write long paragraphs and they'll turn out shorter on paper. When you need to line up some particular columns, you'll be able to so with the TAB SET function . Otherwise, it generally doesn't affect your writing.

WORD WRAP

The other slight oddity you'll notice is that when you hit the end of a line, you don't have to press RETURN. The cursor jumps to the next line by itself, even if it's in the middle of a word. Don't worry about the document coming out with words broken in the wrong place. Since the screen display is not the same format as the printed version, the program ignores the word breaks until it has to print out the document. Then, it moves the words around so they are not broken. If a word is too long to fit on a line, the whole word moves to the next line.

If you want to see how your document is formatted in 40-column word wrap, you can use the Control F (FORMAT) function (to be explained later). This feature still won't allow you to see your document exactly as it appears on a printed page, but it does give you the oppportunity to proofread the text without split words.

One thing you'll see when you start typing is that the screen "paper" never seems to run out. All the words run off the top of the screen as you type.

Type as quickly as your creative thoughts flow. Once you've got what you have to say down, you can go back and polish it up.

There are generally three stages to word processing. First you write, then you edit, and then you do something with the final document like store it on a disk or print it out.

COMMANDS

Once you become proficient in word processing, you'll want to jump around these stages all the time. There may seem to be a lot of different keys and commands to use to do so, but you will shortly know all the keys. Some are displayed on screen, and others are easy to remember because the key is the first letter of the function. (T for tab, M for move, S for search, and so on.)

Remember that there are two areas on the screen that keep you abreast of what is happening: the changing reminder billboard at the top of the screen and the message center at the bottom.

THE TOP OF THE SCREEN

The top section of the screen displays some reminders of the options you have available. Remember this will change from to time to time according to what function you've accessed.

```
F1/F7  SCROLL UP/DOWN      F5 SAVE FILE
F2     ERASE OPTIONS       F6 LOAD FILE
F3/F4  CHANGE COLORS       F8 HELP

□
```

The FUNCTION keys are the four keys on the right side of the keyboard marked F1 through F8. Each key is actually two keys. By pressing the SHIFT key and the F1 key simultaneously, it becomes the F2 key.

Before we go any further, it would be helpful to have some text loaded to demonstrate some points. Press F6 (SHIFT KEY and F5). The screen flashes twice and a note says if a file is in the computer memory now, the file you load will start at the end of it. (This comes in handy when you want to chain files together which will be explained later.)

Press C to continue and type WSAMPLE for the file name you want to load. You'll see the name appear at the bottom of the screen. Be sure it is typed exactly the same as it appears here -- all capital letters and no extra spaces or the program won't recognize it on the disk. The master disk should be in the drive. Press

RETURN and the WSAMPLE file should appear on screen after several seconds. Now we have some text to work with.

Let's go through each FUNCTION key:

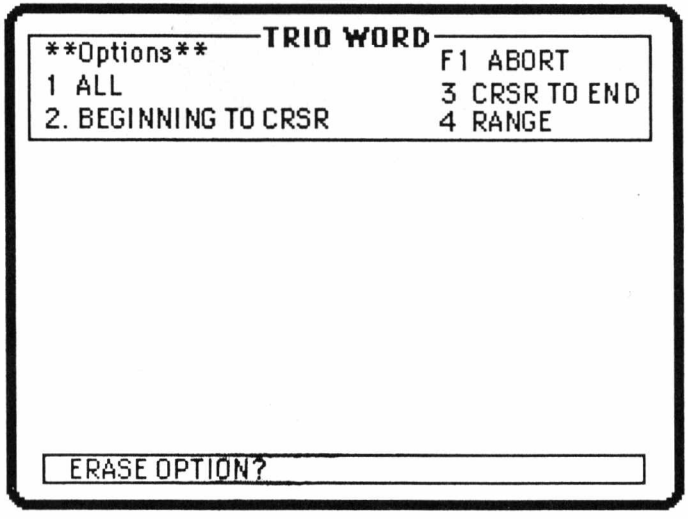
SCROLL

F1/F7 SCROLL UP/DOWN: When you have a lot of text typed, it can't all fit on the screen at once. Picture your text or "document" as a long sheet of paper and the screen as a window that you can move up and down the document to view it. The F1 key allows you to SCROLL the document DOWN. By holding either key down, the page will scroll continuously.

Press the F1 key. You'll see the beginning of the document scroll off the top of the screen and new text appear on the bottom. Keep an eye on the flashing cursor key. This is the point where text would appear if you started typing. It's your location marker.

ERASE

F2 ERASE OPTIONS: Pressing F2 (SHIFT KEY AND F1) puts you in the ERASE mode. You have a number of options which are displayed at the top of the screen.



You can erase the whole file, that is, the document you have loaded in the computer now. Or, you can erase everything from the beginning to where the cursor is located. Or erase everything from where the cursor is located to the end of the file. Or erase a "defined range", a section which you can designate in the document. You will learn to define a range later.

Before actually pressing F2, scroll down towards the end of the SAMPLE document you have loaded and leave the cursor flashing at some point before the end -- say, at the paragraph that starts with "So long, Mom."

Since F1/F7 jumps the cursor around, you may need to use the CRSR keys to place the cursor exactly where you want it. The up and down arrow key moves the cursor down. If you press the SHIFT key along with this CRSR key, CRSR the cursor will move up. And the right and left arrow CRSR key moves the cursor right. Press the SHIFT key with it to move the cursor to the left.

Let's say you wanted to erase everything below the flashing cursor -- the last paragraph and your send off. Press F2. The top of the screen changes and displays ERASE options.

You can escape from this mode, if you change your mind, by pressing the F1 key. Now, you can erase everything from your cursor to the end of the file by pressing the 3 key. You are given one more chance to change your mind. If you confirm that you do want to erase that section -- by pressing F2 -- it will disappear right before your eyes.

CHANGE COLORS

F3/F4 CHANGE COLORS: You can change the text color using the F3 key and change the screen background color using the F4 key (SHIFT and F3). Some people prefer a dark background with a green or orange text, giving an effect similar to a tinted monitor. Others prefer a white background with black text because this is the way you normally read print. You can run through the whole spectrum of Commodore colors by pressing the keys. Keep experimenting until you find something you like. If everything disappears, you have chosen the same background and text color. Don't worry; you haven't lost anything. Just readjust your colors to remedy the problem.

SAVE

F5 SAVE A FILE: This section allows you to save a document onto a disk for later retrieval. You will usually want to save the entire file. TRIO WORD also has a feature enabling you to save any portion of it.

Your options, which are displayed on the top of the screen, are similar to the ERASE option.

```
TRIO WORD
**Options**                F1 ABORT
1 ALL                      3 CRSR TO END
2. BEGINNING TO CRSR       4 RANGE

SAVE OPTION ?
```

-- You can save the entire file (#1), or
-- a selection from the beginning of the file to where the cursor is flashing (#2), or
-- a selection from the flashing cursor to the end of a file (#3), or
-- a "defined range" which is a portion of the file you designate (#4). Defining ranges will be explained soon.
-- You can also get out of this mode by pressing F1. The program returns to the text entry mode.

Now that you have modified your sample letter, you should save this version. Press the F5 Key. The screen will flash and display your options. In this case, we want to save the whole letter. Choose #1 - All.

Next, you are prompted for the filename you'd like to save the the letter under. The file already exists under the name WSAMPLE on the master disk.

You have two choices . If you want to replace the old file with this one -- in other words, if you made corrections which made the older version obsolete -- you would enter the old filename: WSAMPLE. The program will ask you if you wish to replace that old file with the new version. If you reply Y, the disk will write over the old one with the new WSAMPLE file.

If you prefer to keep the old version and SAVE this new one as well, just give it a new name when prompted for the SAVE - FILENAME ("WSAMPLE2, " for example). For now let's skip resaving this letter -- mainly, because it's better to avoid saving files onto the Master Disk and we haven't yet learned to format a blank disk.

When naming your files, you can use either upper or lower case letters, and numbers. Avoid spaces and special symbols or punctuation. You also can not START a file name with a number.

LOAD

Pressing F6 (SHIFT and F5) gives you a prompt which says if you already have a file in the computer memory right now, the file you are loading will be placed at the end of the existing one. This, you will see, is useful when you need to combine documents or standard paragraphs.

Let's load in WSAMPLE again so you can see how the letter will be loaded at the end of the first copy.

Press C to continue and at the bottom of the screen it asks for the name of the file you would like to retrieve. Type in the name --WSAMPLE -- and press the RETURN key.

Now scroll down the document and you'll see two copies of the letter -- the first copy without the last paragraph followed by the original unchanged version.

```
LOAD FILENAME? □
```

When you want to load a file, you must remember to type the name exactly as you have saved it. The computer is very literal and won't find "Nickysletter" if you saved it as "Nikkisletter."

If the file cannot be found, the computer will give you an error message at the bottom. Check your file name by the listing the data disk's file directory and try again. (See CTRL D options to list the directory.)

HELP

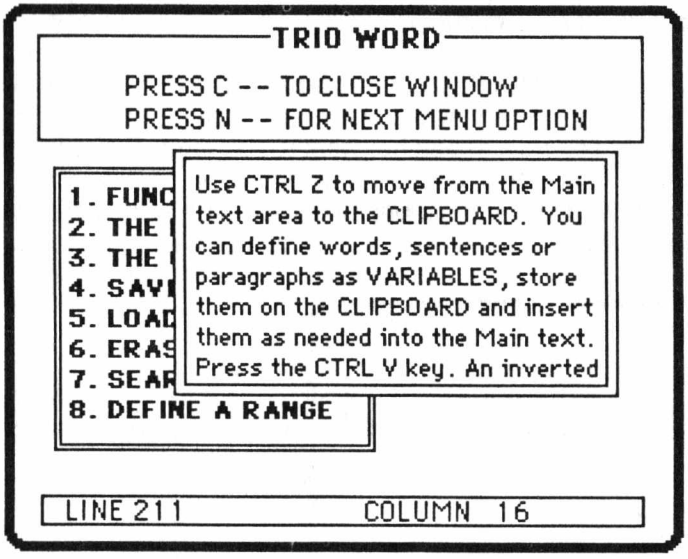
F8 HELP: When you are stuck and can't remember what to do, you can always consult the HELP WINDOWS. Press F8, and an overlay window opens over your present document. It gives you a number of options to choose from so you can get specific answers to your questions.

```
TRIO WORD
PRESS C -- TO CLOSE WINDOW
PRESS N -- FOR NEXT MENU OPTION

1. FUNCTION KEYS
2. THE KEYBOARD
3. THE CTRL KEYS
4. SAVING A FILE
5. LOADING A FILE
6. ERASING TEXT
7. SEARCH & CHANGE
8. DEFINE A RANGE

LINE 211          COLUMN 16
```

Actually, there are two HELP menus with a total of 18 topics to choose from. Press the appropriate number and HELP is on the way. Press the N key to see the next menu of 9 choices.

Make sure your MASTER DISK is in the drive because the program is going to answer your question by loading information from the master disk.

Pick the topic that best addresses the question you have. A special information sheet appears that will hopefully answer your question. If not, you can requst more information until your question is answered. When you finish, press C to close the window.



In the meantime, your present document is "on hold". When you are finished with the HELP WINDOW, you'll be returned to where you left off.

That covers the FUNCTION keys which are critical to the program's operation.

MORE KEYS

We've just scratched the surface of TRIO's powers. There are a lot of other keys designed to carry out various operating commands:

HOME AND CLR CURSORS

HOME: Sends the cursor key to the beginning of the page if pressed once or the end of the page if pressed twice.

CLR: Sends the cursor key to the beginning of the file if pressed once and to the end of the file if pressed twice.

To see these keys work, move you cursor down into the letter to Mom that you have loaded. Press the CLR/HOME key once and you'll see the cursor jump to the top left corner of screen. Now press it again and watch it jump to the bottom right corner of the screen.

Now, if you hold the SHIFT KEY down and press the CLR/HOME key, it will jump back to the beginning of the letter. If you press it twice it will jump to the end of the file.

INSERT/DELETE

INST/DEL: Inserts a space to the right of the cursor or deletes characters left of the cursor.

Next to CLR/HOME, you'll find the INST/DEL key. If you press it, characters to the left of the cursor will be erased. Use this to make minor corrections or changes in your document.

If you press the SHIFT key and INST/DEL you can INSERT spaces to the right of the cursor keys. Use this to add a word or characters you may have left out.

To try these keys with your sample letter (assuming that your cursor is at the beginning of the letter), move the cursor to the second line -- "15 Main Street" -- by pressing the CRSR key with the up/down arrow on it once. The cursor should be flashing over the "1" in "15." Now, press the other CRSR key, with the right/left arrows, seven times, or until it is flashing in the space between the "n" and the "s."

Since she moved recently, how about changing "15 Main Street" to "222 Park Street"? Press the INST/DEL key seven times and you'll see the "15 Main" disappear and the "Street" move back. That's how the DELETE part of this function works.

To add the new part of the address -- "222 Park" -- you need to add eight spaces before "Street." So hold down the SHIFT key and press the INST/DEL key eight times. As you can see, this moves "Street" to the right, INSERTING eight spaces. Now you can type in "222 Park."

SHIFT

SHIFT: This gives you upper case letters just as the shift key does on a typewriter. It also gives you access to the other symbols on the number keys and to several of the FUNCTION keys.

SHIFT LOCK: You can type upper case letters without holding the SHIFT key down. Everything else that you use with the SHIFT, however, has to be accessed by pressing that key.

INSERT MODE

ARROW UP KEY: This very important key, located near the top right of the keyboard, will be used frequently when you are editing a document because it allows you to insert anything you want in the middle of the document.

When you load TRIO WORD, you are in STRIKE OVER mode. This means that if the cursor is on a letter and you type another letter, the former will be replaced.

By using the INSERT mode, you can insert a letter, sentence, paragraph, or any block of text into the middle of an existing document without erasing the text that's already there.

By pressing the ARROW UP key, you'll enter the INSERT mode. (An inverse "i" at the bottom of the screen will remind you that you're in this mode.) Everything that follows the cursor when this key is accessed will be pushed back to make room for inserted text. Pressing the ARROW UP key again puts you back into standard STRIKE OVER mode.

Let's say that you've finished typing the letter and you realize that you left out a whole sentence in the middle of the first paragraph. After the first sentence which ends with "called TRIO," you wanted to say "I traded in my typewriter." Move your cursor up to the spot where this sentence belongs -- after "TRIO" and before "Well" in the next sentence. Normally if you were to type in the new sentence, it would type over the following one. But if you access INSERT, you can just move the next sentence over.

Press the ARROW UP key and type in the missing sentence. As you can see, everything that follows it will be pushed back. When you are finished, press the ARROW UP key again to leave the INSERT mode.

The normal STRIKE OVER mode lets you quickly get rid of text you don't want. If you want to change the letter greeting from "Mom" to "Pop," just type right over "Mom" rather than erase it.

CURSOR KEYS

CRSRS: The two CRSR keys with arrows on them are located at the bottom right corner of the keyboard, next to the space bar. As you have already seen, these are very useful keys when it comes to moving your cursor around the screen.

To review, the CRSR key with the UP and DOWN ARROWS moves your cursor down and up (in combination with the SHIFT key). Press the CRSR key and you'll see the cursor move DOWN. Press the SHIFT and this CRSR key, and the cursor will move UP.

The CRSR key with LEFT and RIGHT arrows behaves in a similar way. Press the CRSR key and the cursor moves right; press SHIFT and the CRSR key and the cursur moves left.

TAB KEY

ARROW LEFT key: The ARROW LEFT key, in the second row from the top at the left of the keyboard, is your TAB key. (In the next section, you'll see how to set up TABS when you begin a document). Pressing the ARROW LEFT key moves the cursor to the next TAB setting.

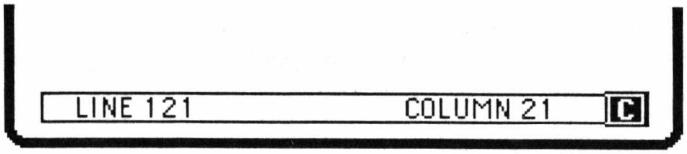
In the sample letter, hold the ARROW LEFT key down and you'll see the cursor jump down the document line by line from column five to column 20. This means there are TABS set at these columns.

THE CONTROL KEYS

There are a number of additional keys that give you access to even more TRIO WORD features. These are regular letter keys that are only active when they are pressed in conjunction with the CONTROL key. The CONTROL key is on the left side of the keyboard, labeled CTRL.

TABS

CTRL T: TAB SET. When you set up your new document, you might want to set TABS. First move the cursor to the column (on any line) where you want to set a tab. Press CTRL and the T key, and the tab will be set at the current column. If you try to set more than 20 tabs, you will get a "All Tabs Used" message on the bottom of the screen.



Move the cursor in the sample to column 30, using your CRSR arrow keys. It doesn't matter what line you are on. Press the CTRL key and then T. As the message center below will tell you, a tab has been set in column 30. If you press the ARROW LEFT key at the left top of the keyboard to TAB, you'll see it jump to column 5, 20 and 30.

Tab settings are saved and loaded with your files.

ERASE TABS

CTRL K: KILL TAB. To erase a tab setting, move the cursor to the column where the tab you want to erase is. Press the CONTROL key, and then the K Key.

You can remove the TAB in column 30 of the sample by moving the cursor to the column (it doesn't matter what line) and pressing CTRL and K. The message center will tell you the TAB has been erased at Column 30. You can test it by pressing the ARROW LEFT key (top left of keyboard) and the cursor will jump from column 5 to 20.

Remember that the LEFT ARROW KEY (left, top) is used to jump to the next tab setting. If the cursor is at column 21 and the next tab set is at column 10, then the cursor will jump to the next line's column 10.

ERASE ALL TABS

CTRL X: ERASE ALL TABS. You can clear all of the tabs set by pressing the CTRL key and then the X key. The message below confirms that you wish to erase all the tabs. Now, if you press the ARROW LEFT key, (top, left) you'll get a "No Tabs Set" message below.

DEFINING A RANGE

Earlier, in the instructions for F2: ERASE OPTIONS and F5: SAVE A FILE, reference was made to DEFINING A RANGE. A "Range" is simply a certain number of lines of text. Once you've defined the range, then you can save, erase, move or duplicate it. A very handy device.

CTRL R: DEFINE RANGE. First, bring your cursor to somewhere in the intended range. Press CTRL and then the R key. As you can see the top of the screen will give you specific instructions.

Now, wherever you move the cursor, the screen displays a reversed text and background colors. This shows that this section has been defined. Moving the CRSR UP or DOWN key defines an entire line at a time. When you have finished defining the range, press RETURN. If you change your mind, press the INST/DEL key (right, top of keyboard) and RETURN.

```
TRIO WORD
MOVE CURSOR IN ANY DIRECTION TO DEFINE RANGE
PRESS RETURN WHEN FINISHED

 I am writing this letter to you on my new word
processor called TRIO. Well it's not just a word
processor. It's a spreadsheet and file manager as
well. Integrated, you know.

 I looked at a lot of programs -- all kinds of stuff
from pricey ones on gold plated disks, to low budget
software on coat hangers.

 The expensive software just did too many things
-- I mean who needs to know the Internal Rate of

LINE 014                    COLUMN 6
```

Let's define a RANGE in the sample letter. Move the cursor down to the first paragraph in the letter that starts with "I am writing..." Now press the CTRL key and R. The first line changes color and a message appears at the top of the screen that tells you to move the cursor in any direction to define the range.

Press the CRSR key. As you do, the text below changes color, line by line. This is your range. When you have changed the color of the section you want defined, press the RETURN key.

Now your RANGE is locked and you can MOVE, DUPLICATE, ERASE or SAVE it. The maximum RANGE that you can define is 99 lines at a time.

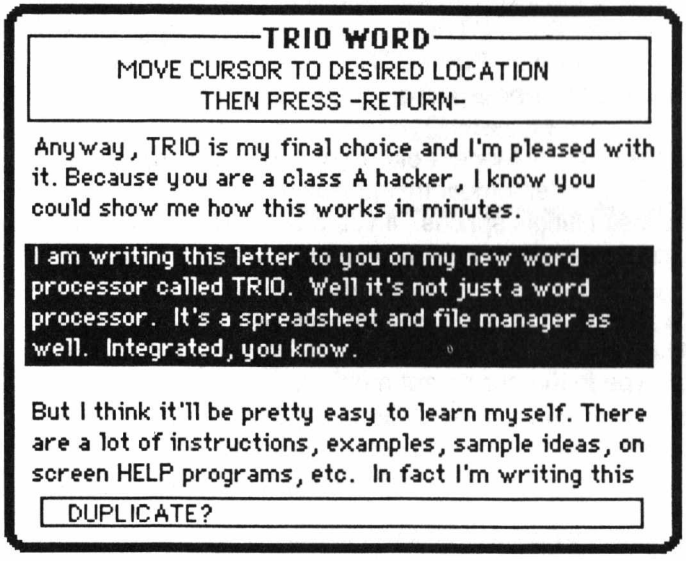
MOVING TEXT

CTRL M: MOVE. This function allows you to move around or duplicate blocks of text. You must FIRST define the range you want, as explained above.

Let's say you want to move a paragraph. Once you've defined the range, move the cursor to the point in the file where you are planning to move the paragraph.

Press the CTRL key and then M. A prompt appears: DUPLICATE?" If you wanted to leave the paragraph in the original spot and make a copy of it in the new spot, you would answer Y (for yes). If you answer N (for no), the paragraph disappears from the original spot and turns up in the newly designated place.

Let's try it with the sample memo. First define the first paragraph as a range. Then, move the cursor down to the space between the seventh and eighth paragraphs (after "works in minutes...") and press the CTRL key first, then M.



In this case, you don't want to duplicate but simply to move the first paragraph down to this spot. So answer N for No. The first paragraph disappears from the beginning and turns up down here.

INSERT/DELETE LINES OF TEXT

CTRL G: DELETE A LINE OF TEXT -- Delete an entire line in the document. Remember how the DELETE key erases single characters to its left? By pressing the CTRL G key , you have the ability to erase whole lines with a single keystroke. This function will delete whatever line your cursor is in.

In your sample letter, go down to the sixth paragraph that starts "Ha, I thought..." and put the cursor on the first line. Press CTRL G. The first line disappears and the cursor is flashing on the second line. Press CTRL G again, and the next line is gone. Do it two more times, and the whole paragraph and extra space are gone.

CTRL A: INSERT A BLANK LINE -- Insert a blank line. This command basically works like the INST key. Remember that pressing the INST key (SHIFT and INST/DEL keys) would insert single spaces. If you press CTRL A , you can insert whole lines. Move your cursor to the place where you want to insert a line.

In the sample letter, let's say we want to add an apartment number to the address. Put the cursor on the "Centerville, NB" line. Press the CTRL A . A line will be added above, and you can type in the apartment number.

SEARCH & CHANGE

CTRL S: SEARCH. This function allows you to search through your documents for a particular word, phrase, sentence or whatever you specify.

Say you always spell "the" as "teh" because you hit the "e" key before the "h." You probably noticed in the sample letter that almost every occurrence of "the" was spelled wrong.

Press CTRL and the S key. At the bottom of the screen, you'll be asked what you wish to search. Enter the word or words you want to search (up to 20 characters) In this case, enter "teh" and press RETURN.

```
F1/F7  SCROLL UP/DOWN      F5 SAVE FILE
F2     ERASE OPTIONS       F6 LOAD FILE
F3/F4  CHANGE COLORS       F8 HELP

  I am writing this letter to you on my new word
processor called TRIO. Well it's not just a word
processor. It's a spreadsheet and file manager as
well. Integrated, you know.

  I looked at a lot of programs -- all kinds of stuff
from pricey ones on gold plated disks, to low budget
software on coat hangers.

  The expensive software just did too many things
-- I mean who needs to know teh Internal Rate of

    SEARCH FOR?    teh
```

Next you'll be asked If the search is LOCAL or GLOBAL. We are about to get to the section on LOCAL or GLOBAL files but briefly, the program is asking if you want to search the presently loaded file (LOCAL) or all your files (GLOBAL). For now, stick to LOCAL.

Once you've answered that question, the program searches the files for every occurrence of "teh" and it stops each time it finds the word. Each time you are offered the option to continue or stop searching.

CTRL C: SEARCH AND CHANGE -- This function allows you to search for a word, phrase, sentence, etc. and change it to something else.

This feature works like the SEARCH feature but takes it one step further. Each time the program finds your requested word or sentence, you are given the option of changing it to something else.

For example, you can easily fix the persistent mispelling of "the." Press CTRL and the C key. You'll be prompted to enter the word or group of words that you wish to search for, i.e. "teh." Then when prompted for the word you wish to change "teh" to, enter "the" and press RETURN. (Answer N to GLOBAL.)

Now the program will search for every occurrence of "teh" and change it to "the."

Actually you have two CHANGE options. When prompted:

Press A and the program will go through the document and change everything automatically.

Press S and it will allow you to decide on each change. The cursor will stop at the first occurrence and ask if you wish to change it. You can press Y to do so or N to leave it the same, and the cursor will jump to the next occurrence.

There are a lot of uses for the SEARCH and CHANGE features. Repetitious words or phrases can be abbreviated in a long document and changed to the full word or phrase when you finish typing. Form letters can be constructed so that personalized phrases (or amounts) can be inserted. (Surely you've received a letter which goes like this: "Dear Mr. Occupant, you and the Occupant family may be the lucky winners of..." That is simply a computer running a form of SEARCH and CHANGE.)

DISK COMMANDS

CTRL D: ACCESS DISK. This allows you to perform a number of useful functions to help keep the files clean.

As you saw earlier, the FUNCTION keys F5 (SAVE) and F6 (LOAD) allow you to store and retrieve your documents on a floppy disk. From time to time you will need for format a new disk or rename a file. Press CTRL and the D key and enter a disk command.

```
DISK COMMAND:  n0:Letters, 11
```

You can enter any disk-related command normally allowed in Commodore BASIC. For example:

s0:filename Scratch a file. Type a small s, a zero and a colon before the name of the file you want to erase. The program will erase the file from the disk.

n0:diskname, ID . If you need a new data disk, you will have to format the disk before storing any files on it. Type a small n, a zero, a colon and the name you want to call the disk. Finally, enter a comma and a two digit ID number. CAUTION: When you format a disk, it erases any previously stored information on it. So be sure the disk you are formatting does not contain any information you might need.

OTHER DISK OPTIONS

$: will display the DISK DIRECTORY. By entering a $ on the Disk Command line, you can see the exact name of each file that you have stored on your data disk. The list appears in a window on screen which can be scrolled by pressing the cursor keys. Press C to close this window.

#: will read a DISK ERROR. Sometimes an error will occur when you are attempting to access your disk. Generally, an error message will immediately be displayed at the bottom of the screen. In this case you wouild get a "file not found" message.

```
62, file not found, 00, 00
```

Other times, you'll have a situation in which the disk drive's read light is flashing (indicating an error) but no message appears. Enter a # sign on the Disk Command line and the disk error message will appear at the bottom of the screen. This may help you get to the bottom of an error which is most likely a hardware malfunction.

LINKING YOUR FILES

The Commodore 64, like all personal computers, has a limit to how much information can be stored in its memory at once. The disk drive extends the computer's memory because additional information can be pulled in and dumped out as necessary.

TRIO was designed with a feature which allows you to access all your files as if they were one continuous document.

For example, if you are writing a book using TRIO WORD, it will probably not all fit in the computer's memory at once. You can enter up to 400 lines of text or about 3200 words at a time. Then you must save the file and start a new one.

One approach to storing your book files is to save each chapter separately (saved as "Chapter 1" and "Chapter 2" and so on). This way, you can make additions to a chapter without running out of space.

The disk will hold many files. Link them all together if you want to SEARCH for something, CHANGE something or PRINT out all the files in sequence.

As mentioned earlier, there are two terms used to decribe files: LOCAL and GLOBAL. A LOCAL file is the one presently in memory. GLOBAL files are a series of files contained on a disk and linked together by the linking command.

To use an earlier example, suppose you have finished your novel and would like to correct the habit of transposing the "h" and "e" when you write "the."

Use the SEARCH and CHANGE feature by pressing CTRL and the C key. Enter the words you are searching for and indicate the change as prompted. Then, instead of a LOCAL change, request a GLOBAL one by pressing Y.

Your writing screen will go blank and the message center asks you for the name of your first file. You would answer the prompt "FIRST FILENAME?:" with "Chapter 1." Now the program knows where to start its search, but how do you tell it where to go from there?

This is done with the FILE LINK CHARACTER using the CTRL N command. The cursor should be moved to the end of Chapter 1 (or whatever file you are using as the first).

Next, press the CTRL key and the N key. An inverse "N" will appear on the screen at the cursor location. Immediately after the N, type the exact name of the next file you would like to follow and press RETURN. In the case of your book, you would enter "Chapter 2" and press RETURN. Remember the file has to be on the same disk.

```
F1/F7  SCROLL UP/DOWN      F5 SAVE FILE
F2     ERASE OPTIONS       F6 LOAD FILE
F3/F4  CHANGE COLORS       F8 HELP

And such was life in the days before word processing.
Erasers were a major industrial influence. Rubber
barons ruled the Eastern industrial cities.

In social circles, pencils were considered the tools of
the working class, whereas pens were the rage among
the aristocracy.

Of course today, the word processor is mightier than
the sword and spelling is a lost art...

N Chapter 2

LINE 356                COLUMN 01
```

Note that the link command must be the last thing in a file. All functions that use global files stop as soon as the GLOBAL link character is found. Therefore, anything typed after it will not be considered. If you load a file and insert the CTRL N code at the end, remember to re-save the file with the code embedded on it.

One note of caution. Be accurate in setting up GLOBAL functions. When you enter the CONTROL N code and the name of the next file to get, you must make sure to enter the file name exactly the way it is stored on disk. Don't leave any spaces before or after the name, and remember to press RETURN at the end of the file name. Otherwise, you'll run into a "FILE NOT FOUND" error.

Each time a file is retrieved and changed, it is resaved before the next file is loaded.

There's still more information to come regarding the linking of files and how you will be able to mix TRIO WORD files with TRIO CALC and TRIO FILE.

In TRIO CALC, you will discover how to convert your financial worksheets so they can be merged with any TRIO WORD document. And in TRIO FILE, you will see how inserting data base information like names and addresses is similar to using the CLIPBOARD in TRIO WORD.

Let's take a look at the CLIPBOARD now.

THE CLIPBOARD AND VARIABLE TEXT

TRIO WORD is unique among word processors in that it has two separate areas where text can be stored and instantly merged. This allows you tremendous flexibility in putting together documents quickly and, almost, automatically.

If you recall, when the program was first loaded, you were asked to "Define Number of Lines in Main Text" and we entered 400 lines. This means up to 400 lines can be stored at once in the computer.

There is another, independent text storage area in the computer's memory called the **CLIPBOARD.** CLIPBOARD text can be inserted into documents instantly by using CTRL codes. This text is referred to as **VARIABLE TEXT.**

Here are two typical applications:

You find that the business letters you send are very similiar, except for a few specific paragraphs. The VARIABLE TEXT feature lets you store as many standard paragraphs as you wish. Each paragraph has a short name. Instead of typing in the paragraphs you need, you just pull them out of the "collection" by their code name. Your letter may open "Dear Bill" but the rest may consist simply of paragraph numbers to which the computer will plug in the appropriate sentences.

You can also have a standard letter with variables embedded into the body of it. In this case, you can simply change the meaning of each variable. That's how you can put Bill's actual name in the third paragraph of a letter and send the same letter to Mary with her name embedded in the same place.

Setting up your CLIPBOARD will take a few minutes. However you can save the final form and, if you use it frequently, it will save you a lot of time in the long run.

First, you can go to the CLIPBOARD by pressing CTRL and Z keys. It should be empty now and the top of the screen indicates that you can go back to the main screen by pressing CTRL and Z again.

```
TRIO WORD
YOU ARE ACCESSING THE CLIPBOARD
PRESS CTR Z TO RETURN TO MAIN TEXT

V A=Thank you for your call yesterday and for
describing the book you have written.

V B=Thank you for your recent letter and the
description of the book you have written.

V C=From your description, the book sounds facinating
and could have great commercial value.

V D=However, it is not the type of book we generally
publish and I will have to decline your offer of an

LINE 001          COLUMN 01
```

First, press CTRL and the V key. An inverse V appears on the screen indicating that you are about to NAME a variable. Name it A. (You can name it anything, up to six characters.) Follow the name with an = (equal) sign.

Then, leaving no spaces, type the text you wish to define as a variable. It can be as long as you want but MUST be followed by a RETURN key symbol.

In other words you are saying "the variable A is equal to the following text which ends at the RETURN key." Whenever you refer to the variable A in the main text, it will reproduce this paragraph.

For example, let's create an all-purpose form letter for a book editor. Define the following paragraphs as follows:

CTRLVA=Thank you for your call yesterday and for describing the book you have written.

CTRLVB=Thank you for your recent letter and the description of the book you have written.

CTRLVC=From your description, the book sounds facinating and could have great commercial value.

CTRLVD=However, it is not the type of book we generally publish and I will have to decline your offer of an evaluation copy. Thank you for your interest.

CTRLVE=Please send me a copy to evaluate for possible publication. I will look forward to hearing from you.

As you can see, any combination of these six paragraphs can be used for all book inquiries.

Go back to the Main Text screen by pressing CTRL and Z. Type in the beginning of the first letter and drop in your variable names as needed. Each variable must be followed by a delineator such as a space, comma, colon, semi-colon, quote mark or period. Otherwise, the name might be next to another letter and the program would not recognize the variable name.

Mr. Bob Smith
22 Main Road
Chips, NB 44404

Dear Mr. Smith,

CTRL VB
CTRL VC
CTRL VE

Sincerely,

Nancy Jackson
Book Editor

In other words, thanks for the letter, Bob; we like the book; send a copy for review. Now, to insert the variables into the letter in the Main Text screen, press CTRL and the I (INSERT) key.

Instantly, the alternate text scrolls into your letter and you are ready to either save it or print it.

Another way to use this feature is to embed variables into a standard letter and change the variables. For example:

Bob Smith
22 Main Road
Chips, NB 44404

Dear Bob,

You will be pleased to know, CTRL VFN that you and the CTRL VLN family have been chosen to guest host the Tonight Show during the week of CTRL VDATE.

In this case, you can go to your CLIPBOARD and change CTRL VFN (representing a first name), CTRL VLN (last name) and CTRL VDATE for each different letter.

For Bob's letter they would be defined as follows:

CTRL VFN=Bob
CTRL VLN=Smith
CTRL VDATE=Dec. 5th

For the next letter you could simply change the variables to the appropriate name and date.

Remember, once a variable is defined, you can use it as many times as you want. If you wanted to refer to Bob throughout the letter, just drop CTRL VFN into the text. Then when you use the letter for another person, you don't have to hunt around for all the references to Bob. Just change the definition of CTRL VFN from Bob to whomever you want.

There's a couple of rules you need to know about defining variables.

The name of a variable cannot exceed six characters. But there is no limit to the number of variables you can have.

The variable itself -- the word, sentence or paragraph you define -- can be any length. But it MUST be ended with a RETURN symbol.

It is not recommended that you try to define more than one paragraph as a single variable because you will have a RETURN after the first paragraph.

The program would think that it is the end of the variable and ignore the second paragraph. If you remove the RETURN symbol at the end of the first paragraph, the spacing is likely to be thrown off.

If you use an undefined variable in the Main Text, the insert will halt and the cursor will flash over the name of the undefined variable. Go to the CLIPBOARD and define the variable. Make sure there is a space, comma, colon, semi-colon, quote mark or period, to separate the variable from the next word in the main document.

When you create the shell of a letter which includes the embedded CTRL codes, save it to disk so you can recall it whenever you need it. Do this before you actually insert the variables. This way, you'll have a "clean" version, without specific names or variables inserted into it.

DISPLAYING YOUR DOCUMENTS ON SCREEN

Because what you see on the screen isn't quite what you see on the printed page, you'll often want to get some idea of how your document is being formatted. As mentioned earlier, you can press CTRL F (FORMAT) to see a 40-column display of your text with no split words (the word wrap feature prints characters to the edge of the screen and then continues on the next line regardless of word divisions).

If you need to have certain words or sentences at a particular location in your document, use the TAB feature. If you want a TAB at a spot past column 40, you'll have to use the PRINT feature to actually change the left margin for that section. Then simply change the margin back to its original setting when you no longer need to offset text. (See the section that follows on printing your documents.)

Another useful feature is the PREVIEW function (CTRL W). This function allows you to view your document on-screen with the page breaks designated. (These breaks do take into account your margin settings rather than the 40-column display.) If you want to change the page breaks, you can either edit your text, or use the "np" printer command which forces a new page (see below).

In neither FORMAT nor PREVIEW can you edit. You will actually have to return to the EDIT mode after viewing the display. Press any key while in both functions to stop the scrolling of the document. Or hold down the CTRL key alone to slow the scrolling. (And then press any key to start the display moving again -- any key but "a," which will abort the function.) Now press any key to return to the main text.

PRINTING YOUR DOCUMENTS

Another feature that distinquishes TRIO WORD as a highly sophisticated word processor is the wide range of printing capabilities that the program has. The printing section is highly flexible, and you will find this to be the most complex area of the program.

Your print-out requirements are going to vary according to: the type of document you have, how you want to present it, what type of printer you are using, the codes required for special outputs like italics and underlining,and so on.

Before you choose the PRINT option, it is probably a good idea to SAVE your document in case you experience printer difficulties.

To access the printer section, press CTRL and the letter P. (Make sure your printer is hooked up and turned on. Upon entering the PRINT mode, you'll see a a warning flash on screen that advises you that your file will be lost if the printer is not properly connected and powered.) You are next asked whether you want to print a LOCAL (in memory now) or GLOBAL (on disk) file.

SETTING UP GLOBAL FILES

Global printing is like global search. You can turn all the files on disk into one continuous one by putting a FILE LINK CHARACTER (CTRL N) and the next file name at the end of each file.

For example, if you are writing a book using TRIO WORD, it would probably not all fit in the computer's memory at once. You can enter up to 400 lines of text or about 3200 words at once. Then you must save the file and start a new one.

One approach to storing your files if you write a book is to save each chapter separately: "Chapter 1," "Chapter 2," etc.

The disk will hold many files; you simply need to link them all together to PRINT out all the chapters in sequence.

Before you actually get to this section of printing GLOBAL files, you need to set up each file with the FILE LINK CHARACTER using the CTRL N command. The cursor should be moved to the end of Chapter 1 (or file you are using first).

Next press the CTRL and N keys. An inverse "N" will appear on screen at the cursor location. Immediately after the N, type the exact name of the next file you would like to follow and press RETURN. In the case of your book, you would enter "Chapter 2" (without the quotes) and press RETURN. Remember the file has to be on the same disk.

Remember that the link command must be the last thing in a file. All functions that use global files stop as soon as the GLOBAL LINK character is found.

PRINTING GLOBAL FILES

Enter the PRINT section by pressing CTRL and P. If you respond Y to the GLOBAL Y/N prompt, you'll be prompted to enter the first file name to be printed. (The document currently in the computer memory will be cleared, so be sure you have saved it.)

You would answer the prompt "FIRST FILENAME?" with "Chapter 1" if you wanted to start printing out your book. Now, the program knows where to start its search. It will load the file, print it and, when it gets to the FILE LINK CHARACTER, load the next file and print it. This process will be repeated until it reaches the last file.

OTHER PRINT FEATURES

The print section also has certain default values:
It will print single space.
The left margin will be 10 spaces.
The right margin will be 70 spaces.
There will be 54 lines per page.
There will be no page numbering.

All these values can be changed easily, but these are their most common settings.

Next, the message center asks if you are using SINGLE SHEET or CONTINUOUS paper. If you are using single sheet, the program will pause between pages and wait until you press C to continue. If you use are using continuous paper, it will print the whole document without pausing.

After answering Y or N to the paper question, the printer will begin. Let's explore how to change the above values.

THE PRINT COMMAND LINE

The COMMAND LINE is accessed by pressing the COMMODORE key, the key with Commodore's logo on it . It is located at the bottom left of your keyboard. When you press it, a small left arrow appears on the screen where the cursor is. Typically, your cursor is at the beginning of the text and you are going to enter a lot of numbers after the COMMAND LINE symbol to instruct your printer how to treat this document.

This is what a typical COMMAND LINE might look like:

(left arrow) lm10:rm60:sp1:pn1:cn0 (with a RETURN after it.)

It may look strange but it's easy to understand:

lm10	set the left margin 10 spaces in.
rm60	set the right margin 60 spaces in. (There are 80 spaces across a page.)
sp1	print one blank space between each line or double space. Single space is sp0.

pn1 page numbering is turned on and pn0 means off.
cn0 text centering is off.

Note that each command is separated by a colon (:). By using these codes you can turn features on and off throughout a document. You might want to center titles only, or turn off the page numbering at certain points, for example.

When you finish editing a document and are ready to print it, use these features if you do not want to use the default values. Remember to enter these codes BEFORE you press CTRL P.

This is a list of print out commands available:

lm (#) followed by a number, will set the left margin.

rm (#) followed by a number, will set the right margin.

sp (#) followed by a number, sets the spaces between lines, 0=single space, 1=double space.

pn (#) followed by 1, means page numbering is ON and 0 means OFF.

pl (#) followed by a number, sets the length of a page. The default is the typical page length of 66 lines. If you use legal sized paper set it to 84 lines.

pf (#) followed by a number, will set the number of lines to a page. The default is 54 lines.

ps (#) followed by a number, will print whatever page number you want at that point. This can be used to start numbering at any number you choose or if you are deliberately skipping page numbers.

sk (#) followed by a number, will instruct the printer to skip a number of lines before it continues the print out.

np (#) This causes the printer to leave the rest of a page blank and continue printing at the top of the next page. For example, if you come to the end of a chapter halfway down a page, the printer will start the next chapter at the top of the next page. However if you want to leave the next page blank, as well, use np2. The printer will put a header and page number on the page but leave it blank in case you want to paste in a chart or illustration.

he followed by a name in quotes, will create a page heading which can be repeated automatically on each page. For example you might want to put the name of a report at the top of each page. The header can be up to 60 characters long.

hd1 will put the header on the left side of the page.
hd2 will put the header in the center.
hd3 will put the header on the right.
hd0 turns the header off.

cn will center the text. CN followed by 1 turns the centering on and by 0 turns the centering off.

rj will print everything right justified. That means all the words in the right margin are even. RJ1=ON and RJ0=OFF.

ju is left and right justification meaning the words are spread out so both margins are even. JU1=ON and JU0=OFF.

df is used with numbers 0-8 to define special ASCII printer codes. (You CANNOT use the number 9 to define an ASCII code.) Printers require different codes in order to reproduce special features like boldface, condensed print, double strike and oversized print. To use ASCII codes, you need to refer to your printer manual to find the correct numbers for each feature. Once you determine the code for boldface is, say, 121, 334, 54, then you can use a df number to represent these codes. This could become df1 and whenever you want to print in boldface you would enter df1 at that point in your text. See below.

[Start underlining. (These pre-defined codes may not work on all printers. If not, you must use the printer's ASCII codes.)
] Stop underlining.

> Start italics.
< Stop italics.

Here's an example of how to enter an ASCII code. If you are using an Gemini 10X printer and want to use the Superscript printing mode, the Gemini manual tells you the ASCII code is 27, 83, 0. If those codes are fed to the printer, it will switch from standard mode to superscript printing. You would enter it like this (assuming you are in a command line):

df CTRL 1=27,83,0

Note that CTRL 1 is pressed. Once this code is entered in a command line, you can enter the superscript mode at any time by entering CTRL 1 again. The 1 will show up in the file inversed but it won't print out. Everything after it will be printed in superscript.

You would probably want to define CTRL 2 as the ASCII code to turn off superscript (consult your printer manual for code numbers) and enter that code on another command line. Then, you can switch between normal type and superscript by entering CTRL 1 to turn it on and CTRL 2 to turn it off.

Printers vary widely according to features. TRIO WORD gives you the capability to take advantage of your printer's features, but it's up to you to consult the printer manual to find out which codes your printer uses and recognizes.

Note that the ASCII code you enter here should be in DECIMAL and not HEX. Your printer manual will give both but stick with the DECIMAL code.

Some of these printer commands can be installed into your document as you are typing it. For example, if you know that a title needs to be centered you might as well put the command code in as you type.

Remember these few rules when embedding printer command codes:

ALWAYS ENTER THESE CODES IN LOWER CASE CHARACTERS.

Always treat the command line as a separate paragraph. The paragraph before it must have ended with a press of the RETURN key; and the command line itself must end with a press of the RETURN key.

A command line cannot be longer than 80 characters. If you need a longer one, you can do it on two lines if you start each line with the Commodore logo key "left arrow."

And finally, **if you are using the df CTRL feature** to enter ASCII codes and the printer does not respond, test to make sure your interface is properly configured. If you are not using a Commodore printer, you may be using an interface which has the ability to compensate for the standard Commodore character set in normal print mode. However, when you want to take advantage of the special ASCII print codes, you may run into some difficulties. You'll probably have to switich from the Commodore conversion mode to the non-Commodore mode. For example, if you're using a CARDCO G interface, you'll have to turn off switch #7.

Some additional information about printer formatting:

SETTING UP A HEADER: The header is always printed on the first line. First, the header must be defined in the command line by using the "he" command followed by the name of the header in quotes. For example:

he"ANNUAL REPORT"

The header cannot exceed 60 characters or you'll get a "long header" report.

Next, you'll have to turn the header on by including one of these commands in your command line: **hd1** will print the **LEFT** flush left; **hd2** will print the header in the center, and **hd3** will print it flush right.

PAGE FORMATTING: In order for the word processor to know where it is on a page, you have to give it set up information.

First, indicate how many printed lines will fit on a page. Normally, at 6 lines per inch, a standard 8 1/2" by 11" paper would have 66 lines available. This is the default value of the program. To enter the page length, use "pl" followed by a number (no spaces) in the command line.

Second, you have to indicate how many lines to print per page. To leave a 1" blank top and bottom, enter 54 lines after the command "pf" in the command line. This is the default in the program.

When you start printing, place the paper in the machine and roll it forward so the print head is on the line that you want to be the top line of each page. If you have defined that page length and how many lines you want printed on each page, TRIO WORD will always advance the paper the correct number of lines.

REMEMBER: Use a colon between each command (semi-colons don't work). When a command is followed by a number, there should not be any spaces between the number and the command.

Also, the quotation marks used to clarify the printer codes above (e.g. "pf" or "pl") should not actually be used in the PRINT COMMAND LINE.

SYNTAX ERROR REPORTS

When you set up your printer codes for an elaborate print out, you might run into a SYNTAX ERROR. This means you did not define or incorrectly defined a printer command. The ERROR appears as a number at the bottom of the screen. To correct it you'll need to refer to the definitions of the SYNTAX ERROR NUMBERS:

ERROR #1: The printer command requires a number. Either no number follows the command, or the number is too long.

ERROR #2: The number of lines per page is too short. The minimum is six.

ERROR #3: The right margin is less than the left margin, or the right margin minus the left margin is less than 10. Each printed line must be at least 10 characters.

ERROR #4: A word is too long to fit within the margin settings. For instance, if the right margin is set 50 and the left margin at 40, only 10 characters can be printed between margins. A word greater than 10 characters would generate this error.

ERROR #5: An illegal command was entered at the flashing cursor position. Check the manual to correct it.

ERROR #6: The page format is greater than the number of lines on a page. For instance, you cannot set commands to print 60 lines on a 50 line page.

ERROR #7: Either there is no RETURN character after the file name, or the name is too long.

ERROR #8: There is either no variable after you have entered a CTRL V or the variable name is too long. Six characters is the limit.

Yes, the printer section is complex. The program contains many practical defaults to streamline this section, but to take advantage of the full flexibility of TRIO WORD, you must have the widest possible range of printing options.

CHANGING DEVICE NUMBERS

There is one final command available to you, relevant to the printer section. By pressing CTRL O (for OPTIONS) , you will see a new section of device numbers displayed at the top of the screen.

```
TRIO WORD
DEFAULT VALUES                PRINTER DEVICE = 8
PRINTER DEVICE = 4            PRINTER FILE   = 4
PRINTER SECONDARY ADDRESS = 7

PRINTER DEVICE # 4
```

These are the values currently used by the program for your disk drive and printer, chosen because they are the most commonly used values. If you are using two drives, you may want to change the drive device number so that TRIO will retrieve data from the second drive.

Some printers require the use of a different device number, file number and secondary address. Your printer manual will specify these values which you can enter in the message center at the bottom.

EXIT TRIO WORD

To exit (or QUIT) TRIO WORD, simply press CTRL Q. You'll be given the option of going to one of the other two TRIO programs, or exiting the program altogether.

TRIO WORD
DEFINITION OF TERMS

This section reviews TRIO WORD's features by giving a brief definition of the features available.

FUNCTION KEYS

F1/F7: SCROLL TEXT --these two keys allow you to move the cursor up and down through the document.

F2: ERASE OPTIONS -- Press the F2 key (SHIFT and F1) to ERASE text in the document with these options:

- The entire document presently stored in computer memory.
- All the text from the beginning to where the cursor is positioned.
- All the text from where the cursor is to the end of the document.
- A range of text that you can define (see RANGE).
- Cancel the erase command by pressing F1.

Enter the appropriate number in the message center at the bottom of the screen. You must also confirm the ERASE by pressing F2 when prompted.

F3/F4: CHANGE COLORS -- Use these keys to choose from a range of 15 background and text colors.

Pressing the F3 key will change the color of the text and F4 will change the background colors.

F5: SAVING A FILE -- The F5 key gives you access to the options for SAVING files. You can SAVE:

- The entire document presently in memory.
- All the text from the beginning to the cursor
- All the text from the cursor to the end of the file.
- A range of text that you can define (see RANGE).
- Cancel a save by pressing F1.

F6: LOAD A FILE -- Load previously stored files from disk.

Pressing the F6 key will display a message at the top of the screen which explains that if you already have a document in the computer memory, the file you load will be put at the end of the present document.

This is a simple method for chaining documents together that are stored separately on disk.

Press C to continue and enter the EXACT name of the file you wish to retrieve.

F8: HELP SCREENS -- This provides operating instructions specific to your request.

This section is accessed at any time during the operation of the program -- but the Master Disk must be inserted into the drive.

When you press F8, a window appears offering a number of general options for instructions. Pick the appropriate topic and the information is displayed.

OTHER KEYS

HOME: Press once and move the cursor to the top left of the display. Press it twice to move to the bottom right corner of the display.
CLR: (SHIFT and CLR/HOME) Press once to move the cursor to beginning of file, twice to move it to the end of the file.
DEL: Delete characters to the left of the cursor.
INST: (SHIFT and INST/DEL) Insert spaces to right of cursor.
ARROW UP: INSERT MODE toggle. Text is inserted into the document instead of typing over existing text.
ARROW LEFT: Tab key.
ARROW CRSRS: These two keys move the cursor left, right, up and down. Used with the SHIFT key to change directions.
COMMODORE KEY: Allows you to embed printer commands for special effects. (see COMMAND LINES).
SHIFT: Upper case letters.
SHIFT LOCK: Upper case locked on.

THE CONTROL KEYS

Press the CTRL key (left, top) and the appropriate letter key.

CTRL A: INSERT A BLANK LINE. This command allows you to insert a blank line anywhere in your text. Place the cursor at the line above which you want a blank line inserted, and press CTRL A.

CTRL B: ACCESS DATA BASE FILES (INTEGRATE TRIO FILE). This function allows you to embed TRIO FILE records into TRIO WORD documents. The process is explained at the end of the TRIO FILE section of the manual because you will need to understand that section's operation to use the integration feature.

CTRL C: CHANGE. Similar to the SEARCH function except you can find every occurrence of a word or words and change it to something else. LOCAL and GLOBAL search and change is available.

CTRL D: DISK ACCESS. Allows maintenance of the files on disk. You can erase a file, change its name, initialize a disk or any other functions used by the Commodore disk operating system. For example:

s0:filename -- Erase a file
n0:diskname, ID -- Initialize a new disk

Also enter a $ to view disk directory and a # to read disk error channels.

CTRL F: FORMAT. Format your file on screen in 40-column word wrap without breaks in words. Good for proofreading text. (You cannot edit in this mode.)

CTRL G: DELETE A LINE OF TEXT. Press CTRL G to DELETE any line of text. First locate your cursor.

CTRL I: INSERT (OR INTEGRATE) CLIPBOARD TEXT. Once you have defined any variable text on the CLIPBOARD, you can insert it into the main text using its variable name.

First you would embed the variable codes into the document in the Main Text area using CTRL V and the variable name (up to six characters). Then, to actually insert the variables, press CTRL I and the text will be inserted into the document in the main text area. See CTRL V.

CTRL K: KILL TAB. Erase tabs individually by placing the cursor in the column that you wish to erase a tab.

CTRL M: MOVE. Move or duplicate blocks of text around the document.

Once you have defined a range, move it by pressing CTRL M. The message center below asks if you want to duplicate the text. If so the original block will remain and an exact copy will appear wherever you instructed the cursor to place it. Otherwise the original disappears from its old spot.

CTRL N: LINK FILES. Allows you to combine a number of files and make one continuous document.

All the files on a disk can be linked together GLOBALLY by using the FILE LINK CHARACTER. At the end of a file, press the CTRL and N keys and an inverted N appears.

Immediately after the N, type the name of the next file to follow and press RETURN. This can be done continuously by loading each file and inserting the inverted N and next file name at the end. The FILE LINK CHARACTER and the next file name must be the last thing in each file, followed by a RETURN symbol. Be sure to save the file with the LINK CHARACTER embedded.

CTRL O: OPTIONS. Change the device numbers on your printer if necessary.

CTRL P: PRINT DOCUMENT. This allows you to print out documents either GLOBALLY or LOCALLY.

Pressing the CTRL and P keys will display a prompt at the bottom: GLOBAL (Y/N)? Answer yes to print more than one file continuously and follow the LINK FILES instructions for GLOBAL files.

The prompt CONTINUOUS? refers to whether you are using continuous paper or single sheet. If you answer N, the program will pause between pages so you can insert paper.

The text will be printed using these standard defaults:

Left Margin: 10 Right Margin: 60 Page Length: 66
Lines to Page: 54 Line Space: 1 Page Number: OFF

If you need to modify the way the text is printed, you can embed codes into the text which will print headers, center text, underline, bold, italicize, etc. See PRINTER COMMAND LINE section below.

CTRL Q: QUIT TRIO WORD. Quit TRIO WORD and go to ond of the other two TRIO sections or exit the program altogether.

CTRL R: DEFINE RANGE. Marks off an area in the document which can then be MOVED, DUPLICATED, SAVED or ERASED.

Press the CTRL and R keys and use the up and down CRSR keys to define the RANGE, which will show an inverse screen. Press RETURN to lock to RANGE.

CTRL S: SEARCH. You can search for a word, sentence or paragraph (up to 20 characters) within the document or GLOBALLY.

Press the CTRL and S keys and enter the word or words you are searching for at the bottom of the screen.

To search LOCALLY, that is in the presently loaded file, the program will stop at each occurrence and asks if you want to continue searching for more occurrences.

To search GLOBALLY, through some or all of the files on a disk, answer Y to the prompt and enter the name of the first file to search. If you have previously set up the FILE LINK CHARACTERS it will continue to the next file.

CTRL T: TAB SET. Set up to twenty tabs. Place the cursor in the column where you want to set a TAB. It doesn't matter what line you are in. Press the CTRL and T key.

CTRL V: NAME VARIABLES. This allows you to designate a word, sentence or paragraph as variable text which can be inserted into a document.

TRIO WORD has two text areas -- the Main Area and the CLIPBOARD. Put text into the CLIPBOARD and name it, using CTRL V.

First, go to the CLIPBOARD from the Main Text area by pressing CTRL and Z. Then type CTRL V and a reversed V will appear on screen.

Follow the reversed V with a name (up to six characters) and, leaving no space, type an = (equal sign) and enter the text you wish to define.

There is no limit to the number of variables you can define but each block of variable text **MUST** be ended with a RETURN symbol.

Go back to the Main Text screen and put in the variable names by pressing the CTRL and V keys followed by the variable name. This name has to be followed by a delineater such as a space, comma, period, colon, semi-colon, quote or period. The delineater will appear on screen so, if easier, use a space.

Then type CTRL I and all the text that you defined will be reproduced at those points in the Main Text.

CTRL W: PREVIEW. Allows you to display your document on screen with the page breaks as they would appear on a print out. You can change these page breaks by using the "np" printer command (to force a new page). You cannot edit in this mode.

CTRL X: ERASE ALL TABS. This will erase all tabs in the present document at once.

CTRL Z: TOGGLE BETWEEN MAIN TEXT AND CLIPBOARD. When you are in the Main Text area you can access the CLIPBOARD by pressing the CTRL Z key. Use this feature to go back to the Main Text as well.

PRINTER COMMANDS

COMMODORE KEY (BOTTOM LEFT): ACCESS PRINTER COMMAND LINE

The PRINTER COMMAND LINE allows you to configure your print out in many elaborate ways -- center headlines, print italics and boldface, justify text, underline and many other things.

You must enter the relevant printer commands into the pages of text (and the places on those pages) where you want these changes to take effect.

Typically, a command line, which starts with a left arrow marker created by the COMMODORE KEY, is put on the first page to set up the margins, page length, etc.

Then, in certain places embedded in the text, you will embed short command lines to center the text or italicize a paragraph. The commands are listed below. Remember, a command line **MUST** end with the press of the RETURN key and it cannot exceed 80 characters.

Be sure to enter these commands in lower case.

lm (#): LEFT MARGIN. A number following lm will determine the spaces from the left edge of the paper where the margin begins. Default: 10 spaces.

rm (#): RIGHT MARGIN. Designate the number of spaces from the left edge of the paper to where the margin ends. Default: 60 spaces.

sp (#): LINE SPACE. This sets the number of spaces between each line. Using 0 means single space (skip no lines); using 1 means double space, etc.

pn (#): PAGE NUMBER. Using 1 turns page numbering on and 0 turns it off.

pl (#): PAGE LENGTH. Tells the computer how long the paper is so it can space to the next page. Standard 8 1/2x11" paper has 66 lines per page.

pf (#): LINE TO A PAGE. This sets the number of lines that will be printed on a page. Printing 54 lines would leave a 1" space at the top and bottom of each page.

ps (#): START PAGE NUMBER. Will print whatever page number you specify on the page and continue to increment the numbers for each subsequent page.

sk (#): SKIP LINES. Specify a number of lines to skip before printing continues. Use to leave a blank space on a page.

np (#): BLANK REST OF PAGE. If you use np1 it will leave the rest of a page blank and continue printing at the top of the next page. Use when the end of a chapter is reached. If you use np2 it will blank the rest of the page and print just the header and page number on the next page. Use to leave pages open for adding graphics.

he (" "): HEADER. he, followed by a name in quotations (up to 60 characters) will create a page heading.

Print the head on the left of the page using **hd1;** in the center using **hd2** and on the right using **hd3.** Turn the header off using **hd0.**

cn: CENTER TEXT. Put the text in the middle of the page. **cn1=ON** and **cn2=OFF.**

rj: RIGHT JUSTIFY. Prints all the text flush right. **rj1=ON** and **rj0=OFF.**

ju: RIGHT/LEFT JUSTIFY. Evens out the text so both columns are flush.

df: DEFINE ASCII CODES. This allows you to load special ASCII printer codes for effects such as superscript or special character fonts. These decimal codes are found in your printer manual.

You can define up to 9 ASCII codes as df and a single number (0-8). For example, determine from the printer manual the code for italics. Assign it to df1 (i.e. df1=344,54, 2) and whenever you want to italicize, embed df1 at that point in the text. Use df2 to represent italics off and you can toggle between the two throughout the text.

[: START UNDERLINING. This key (upper case colon) will start the printer underlining in printers that allow it. If your's doesn't, refer to the manual for ASCII codes.

]: STOP UNDERLINING. This key (upper case semi-colon) stops underlining.

>: START ITALICS. This key (upper case period) puts the printer into italics mode. If not, use the appropriate ASCII codes.

<: STOP ITALICS. This key (upper case comma) ends the italics mode.

SYNTAX ERROR REPORTS

When printing, a SYNTAX ERROR is an undefined or incorrectly defined printer command. This appears as a number at the bottom of the screen. To correct it you'll need to refer to these definitions.

ERROR #1: The printer command requires a number. Either no number follows the command or the number is too long.

ERROR #2: The number of lines per page is too short. The minimum is six.

ERROR #3: The right margin is less than the left margin or the right margin minus the left margin is less than 10. Each printed line must be at least 10 characters long.

ERROR #4: A word is too long to fit within the margin settings.

ERROR #5: An illegal command is at the flashing cursor position. Check the manual to correct it.

ERROR #6: The page format is greater than the number of lines on a page. For instance, if you have set the command line to print 60 lines on a 50 line page, you'll get this error.

ERROR #7: Either there is no RETURN character after the file name or the name is too long.

ERROR #8: There is no variable after you have entered a CTRL V or the variable name is too long. Six characters is maximum.

TRIO CALC

QUICK START

FUNCTION KEYS:

F1	RECALC
F2	CALC ON/OFF
F3	TEXT COLOR
F4	BACKGROUND COLOR
F5	SAVE
F6	LOAD
F7	PRINT
F8	HELP WINDOWS

CONTROL KEYS (CTRL)

Hold the CTRL key (left, top) down and press a key:

CTRL B	BLANK OR ERASE THE CONTENTS OF A CELL
CTRL C	COPY CELL, ROW, COLUMN OR BLOCK
CTRL D	DISK OPTIONS: RENAME, ERASE FILE, FORMAT
CTRL E	EDIT WITHIN A CELL (SAME AS = SIGN)
CTRL F	FORMULA ENTRY
CTRL G	GO TO ANY DESIGNATED CELL LOCATION
CTRL L	LENGTH OF CELL: CHANGE COLUMN WIDTHS
CTRL Q	QUIT AND GO TO OTHER PROGRAMS
CTRL S	STYLE OF DISPLAY: LEFT, RIGHT, $, DECIMAL
CTRL T	TEXT ENTRY INTO CELL
CTRL V	VALUE ENTRY INTO CELL
CTRL W	WINDOW CAN BE SET BY COLUMN OR ROW

OTHER KEYS:

INST	INSERT A WHOLE ROW OR COLUMN
HOME	CURSOR TO BEGINNING SCREEN/SHEET

CLR	CURSOR TO END SCREEN/SHEET
CRSR	MOVE CELL POINTER IN DIRECTION OF ARROW
SHIFT	UPPER CASE LETTERS
LOCK	UPPER CASE LOCKED ON
RUN/STOP	CANCEL A FUNCTION
$	DISPLAY DISK DIRECTORY
@	DISPLAY DISK ERROR CHANNEL
UP ARROW	DISPLAY ROW IN WINDOW
LEFTARROW	DISPLAY COLUMN IN WINDOW

ENTRY & EDIT MODE

=	ENTER EDIT MODE (SAME AS CTRL E)
CRSR	MOVE CURSOR LEFT AND RIGHT
F1	MOVE CELL POINTER UP
F3	MOVE CELL POINTER LEFT
F5	MOVE CELL POINTER RIGHT
F7	MOVE CELL POINTER DOWN
INST	INSERT SPACE TO RIGHT (EDIT MODE)
DEL	DELETE CHARACTERS TO LEFT (EDIT MODE)

MATH SYMBOLS

+	ADDITION
-	SUBTRACTION
*	MULTIPICATION
/	DIVISION
:	DESIGNATE RANGE
^	EXPONENTIATION (To the power of...)

TRIO CALC: THE SPREADSHEET

What is the TRIO CALC spreadsheet, and what can you do with it?

TRIO CALC is an electronic spreadsheet, a computer version of those large green financial worksheets with rows and columns that you always see around the controller's desk in the office.

Those sheets were used for recording and tabulating numbers, and that is the purpose of TRIO's spreadsheet as well.

With a spreadsheet, a company can set up a budget with each month across the top row and the upcoming year's expected income and expenses running down the left column.

When you start using a spreadsheet, the figures you enter are oftenprojections or estimates based on price quotes or past experience. But if you want your documents to contain meaningful information, adjustments must constantly be made.

Think about it. If sales go down one particular month, how will it affect your cash flow ? If expenses are traditionally higher during the summer, how will you increase sales to meet them? Any single change, any small flucutation in the market, will affect the results of your entire sheet.

If you were using a paper financial spreadsheet , each time you made a change, you would have to recalculate the entire sheet manually. With TRIO CALC, you insert formulas into the sheet and the program recalculates your changes -- instantly!

What follows is a step-by-step operating guide to TRIO CALC with a specific example to guide you through the many features the program offers.

LOADING TRIO CALC

Let's load the program up and have a look at TRIO CALC's layout. Assuming you have your disk drive and computer hooked up and turned on, you should carefully insert the Master Disk, label up, into the disk drive and close the door. The oval shaped slot that exposes the disk itself should go in first. Remember to avoid touching that exposed area because it is delicate.

Type **LOAD "TRIO",8,1** and press the RETURN key. The drive will run, the red light will go on and within 15 seconds, you should see TRIO's Main Menu on screen.

As you can see, you can start with any program. Choose #2: TRIO CALC and the program will load. You will see a screen that looks like this:

```
F1-RECALC    F3-COLOR     F5-SAVE      F7-PRINT
F2-CALC      F4-BACKGD    F6-LOAD      F8-HELP
        1            2            3            4
1
2
3
4
5
6
7
8
9
10
 r2c1          CALC on   >#   t<   no$   .00
MENU: Blank  Copy  Disk  $  @  =Edit  Formula
Go  Len  Quit  Style  Text  Value  Window ← ↑
```

The screen is divided into three sections. The top and bottom contain operating information and the center is your work area, just like it is in the TRIO WORD layout.

The top contains a reminder of what each FUNCTION key (F1-F8) does. In most instances, these keys do the same things that they do in TRIO WORD and TRIO FILE. We will cover each as we progress through the instructions.

Similarly, at the bottom of the screen there are a number of keywords which allow you to access additional operating commands. These, too, will be covered one-by-one.

The work area of the screen has numbers 1-4 across the top and 1-18 along the left side.

In the left corner, there is a white block which is the **CELL POINTER** that shows you where you are located in the spreadsheet.

There's a lot more to TRIO CALC than meets the eye, however.

Picture a sheet 40 columns wide by 60 rows deep. What you are looking at now is a small "window" or a corner of that sheet. And picture in these cells a series of mathematical formulas that will instantly calculate thousands of numbers.

MOVING AROUND THE SHEET

You can move to any section of the sheet by using the same ARROW CRSR keys used in TRIO WORD. They are located at the right, bottom of the keyboard. Press the UP/DOWN cursor to move the cursor down; press SHIFT and the CRSR to move up. Press the LEFT/RIGHT CRSR to move right and; and press SHIFT and the CRSR to move left.

Use the cursors to move the CELL POINTER.

Hold the CRSR down key and the CELL POINTER will move to the bottom of the screen. Then the row numbers on the left will change, getting higher. This indicates where you are on the sheet. If the cell pointer is next to the 50, you are 50 rows down in the sheet, in the first column.

Press the right arrow CRSR key, and it moves the cell indicator to the right of the screen. You'll notice that the numbers are changing at the top of the screen -- 5,6,7,8,9. Again, you are moving to a different location on the sheet. If you stop at COLUMN 9 (showing at the top) then your cell pointer is sitting at a cell which could be called ROW 50, COLUMN 9.

Every cell has a unique name. Row 50, Column 9 is called: r50c9.

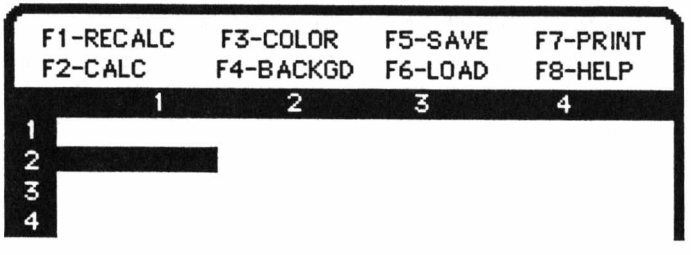
As you can see at the bottom left of the menu on screen, the PRESENT CELL LOCATION is displayed. You can watch this change as you move the cell pointer around the sheet. Whenever you move the pointer , this locator will tell you exactly where you are. Right now it should read r50c9 and when the cell pointer is at the top left of the screen it would read r1c1.

THE CLR/HOME KEY

Let's go back to the home corner for a minute. Press the **CLR/HOME** once and the cell pointer moves up to the top of the screen. Press it again and it goes to the r1c1 (Row 1, Column 1) cell.

This works wherever you are on the sheet. Press CLR/HOME to go to the top of the display, twice to go back to the top corner of the sheet.

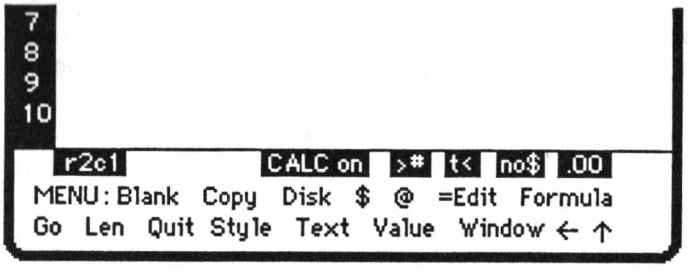
Now use the SHIFT key with CLR/HOME to go to the bottom of the screen. Press it once to go to the bottom of the display, twice to go to the bottom corner of the sheet.



MAKING ENTRIES

If you were to enter a number right now, it would be placed in location r1c1 (Row 1, Column 1) because that's where the indicator is sitting.

Let's work with a simple entry for a minute, putting some numbers into cells the same way we would on a paper spreadsheet. Remember, the menus at the top and bottom of the screen signify key functions used in the program.



THE VALUE KEY

The first CTRL key you'll want to familiarize yourself with is the VALUE key. Suppose you want to enter a number or VALUE in cell r1c2 (Row 1, Column 2). If you hold down the CTRL key and press the V key, the screen at the bottom will display the prompt "VALUE" and the cursor will flash where you enter the value.

Start by typing 500 -- no dollar signs, commas or anything -- and press RETURN. The 500 appears where the cell indicator is located. As you can see, two decimals have been added automatically. (This can be changed using the STYLE feature which we will cover shortly.)

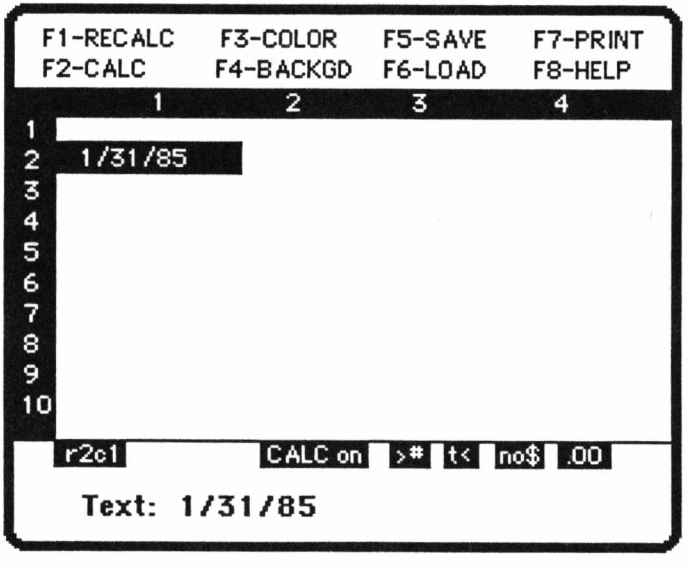
Now, move the cell indicator down one cell to r2c1 (Row 2, Column 1) by pressing the ARROW CRSR key with the up and down arrows on it. Pressing it once will move the indicator to r2c1 which is blank for the moment.

Press CTRL and the V (VALUE) key again and this time enter 200 and press RETURN.

If you were using a paper spreadsheet and you wanted to show the total of the two numbers you'd write the number 700 in the cell called r3c1 (Row 3, Column1). You can do that here as well by moving the cursor down and typing 700 and pressing RETURN.

Actually, the program will accept a number without having to enter the V first to indicate it is a value. Simply typing the number and RETURN will enter it into a cell. This is also true for TEXT. If you type a letter the program will assume it is meant to be a word.

But you will need to use CTRL T and CTRL V to specify Text or Value in certain circumstances. For example, to enter a numerical date such as 1/31/85 you would need to indicate that is is text or else the program would read the numbers and store the date as a value.



In other situations, you might want to enter mathematical formulas as VALUES. Let's say you wanted to compute the square root of a number for only one cell. Using the mathematical functions listed at the end of "DEFINITION OF TERMS," you would enter sqr (n). If you didn't enter this as a value, the program would read the "sqr" function as text. When you enter a formula as a value, the program computes and stores its value in the cell.

THE FORMULA KEY

In most situations, you won't be entering formulas that calculate the value of a single cell (as we did above). Instead, you'll want to calculate information that resides in several cells.

To demonstrate the unique ability of the electronic spreadsheet, let's enter a formula that will calculate the contents of cells r1c1 and r2c1. (There's really no reason you would have to enter that 700 sum yourself; after all, that's what the program is for!)

So go ahead and put the cell indicator at cell r3c1. Press the CTRL and F keys to enter a FORMULA. Note the flashing cursor at the bottom of the screen in the menu area. The program is waiting for you to enter a formula.

To add the contents of cells r1c1 and r2c1 together and put the results in cell r3c1, you would enter the formula: r[-2]:[-1]c and press RETURN. This formula means that the sum of the cells r1c1 and r2c1 will always be displayed in the cell r3c1, no matter what the values are.

WHY? Let's take this one step at a time. Whenever you enter a formula, your cell indicator is the reference point and the formula refers to cells around it. When you press"c" with no number reference following it, you are saying "refers to the column that I am presently in." Pressing "r" with no number reference means you are referring to the row you are presently in.

Entering r[-2]c then, means that you want to refer to a point two rows above the cell indicator but in the same column. You use the + (plus) sign to refer to any cells down or to the right of the cell pointer, and the - (minus) sign to refer to cells above or to the left of it. Here's a good way not to get confused when you're referencing cells: use the + sign to indicate an advance from the home corner; use the - sign to refer back towards it.

The colon in r[-2]:[-1] indicates a range, in this case one that spans from the point two rows above the pointer to the point one row above the pointer.

Always, remember, the formula relates to the position of the cell indicator. Another example: rc[+3] refers to the cell in the same row as the indicator but three columns to the right.

```
F1-RECALC    F3-COLOR    F5-SAVE    F7-PRINT
F2-CALC      F4-BACKGD   F6-LOAD    F8-HELP
        1          2          3          4
1
2     500.00
3     200.00
4     700.00
5
6
7
8
9
10
r3c1          CALC on   >#  t<  no$  .00

Formula: r[-2]:[-1]c
```

If everything's gone right, cell r3c1 should have 700 displayed in it. Now go up to cell r1c1. Enter 600 and press RETURN. See what happens to cell r3c1? The sum changes to 800 instantly.

Because you entered a formula, cell r3c1 will always give you the totals of r1c1 and r2c1.

You can enter formulas using any of the math functions the computer can perform such as addition, subtraction, multiplication, division, percent, exponentiation, etc.

Now let's say we want r3c1 to give us the results of multiplying (rather than adding) r1c1 and r2c1. We can enter a new formula in cell r3c1 or we can simply edit an existing one just as we can edit text in TRIO WORD.

Place the cell pointer in r3c1. You'll notice that the word "Formula" on the menu is reversed, indicating that a formula occupies this cell.

THE EDIT KEY

If you press the CTRL and E (EDIT) keys, whatever is in the cell you have indicated will appear at the bottom of the screen. Because this function is used frequently, the program is designed so you can also press the = (equals) key to access the EDIT function.

By using the CRSR (and SHIFT) key, you can move the cursor right and left through the formula to edit it. Make changes by placing the cursor over the characters to be changed and entering the new information.

You can think of this EDIT area as a scribble pad of sorts. What you do here has no connection to the actual spreadsheet until you enter the information by pressing RETURN.

When you are in the EDIT mode, you can move the cell pointer around the spreadsheet by using the FUNCTION keys as follows:

F1: UP F3: LEFT F5: RIGHT F7: DOWN

Once you have written a formula, text or value into the cell indicator, you can move it around using the FUNCTION keys and then drop it anywhere by pressing RETURN.

Let's take the example of the formula we entered earlier -- r[-2]:[-1]c. By using the cursor keys , you can move to the middle of the formula and strike over the colon. Now hold down the SHIFT and press the INST/DEL key twice to insert two spaces. Type c*r in the space and press RETURN. The formula should now look like this:

r[-2]c*r[-1]c (You can use upper or lower case letters.)

Now you have changed the formula so that when you press RETURN, cell r3c1 will display the results of multiplying cells r1c1 and r2c1 together and the result should be 120,000.

```
F1-RECALC    F3-COLOR    F5-SAVE    F7-PRINT
F2-CALC      F4-BACKGD   F6-LOAD    F8-HELP
        1          2          3          4
1     600.00
2     200.00
3  120000.00
4
5
6
7
8
9
10
r2c1          CALC on   >#  t<  no$  .00

Formula: r[-2]c*r[-1]c
```

USING THE EDIT KEY TO MOVE CELL CONTENTS

The EDIT key also allows you to drop edited material anywhere on the spreadsheet. Before you press RETURN to complete an edit, simply use the FUNCTION keys to move to the cell in which you want to drop the information, and press RETURN. The original information will remain in its cell, so if you want to get rid of it, you have to BLANK the cell.

You can also use this routine to duplicate the contents of one cell to another. Say you wanted the formula in r3c1 to also be in r3c2, right next door.

Place the cell pointer on cell r3c1 and press CTRL E. Now (just as you did above),use the F5 key to move right one cell (to r3c2) and press RETURN. You've just picked up the contents of cell r3c1 and made a copy of it in r3c2. The original one remains in its cell. This is basically the same routine described above, except you're duplicating rather than actually editing.

Remember that the formulas we've been working with so far are RELATIVE -- they refer to cells that relate to the cell pointer in some specific way. The formula we just moved refers to cells r1c2 and r2c2 because it resides in r3c2. When you write a RELATIVE formula, you can move it and it will relate to the new cell location.

Since there are no values in r1c2 and r2c2, the cell r3c2 has nothing to multiply. You will get a message at the bottom of the screen that says "type mismatch error at r3c2," but see what happens when you enter 50 in r1c2 and 65 in r2c2. Now the program has something to compute.

MATHEMATICAL SYMBOLS

Remember the most common symbols when creating formulas:

The **COLON (:)** defines a range of cells.
The **ASTERISK (*)** stands for multiplication.
The **PLUS (+)** stands for addition.
The **MINUS (-)** stands for subtraction.
The **SLASH (/)** stands for division.
The **CARET (^)** stand for exponentiation.

By the way, you should be aware that there are PRECEDENCE RULES that the program follows when it evaluates a formula. This means the program will perform all the multiplication and division first and then do the addition and subtraction.

It may not seem too important, but look what happens to a formula like this: 3 + 3 * 4. If you figured this out in natural order -- left to right -- you'd get 24 since 3 + 3 = 6 and 6 * 4 = 24. But if you calculated it by order of PRECEDENCE, you'd get 15 since 3 * 4 = 12 and 12 + 3 = 15.

If you want to change the order of PRECEDENCE, you can use parentheses. Any part of a formula that is contained within parentheses will be calculated first. So if you need to add two numbers before multiplying the total, put the two numbers in parentheses. The example would read (3 + 3) * 4 = 24.

Formulas can be of varying complexity. It depends on the results you are hoping to obtain. We'll illustrate more formulas as we go along.

As you can see, spreadsheets are really a two-step process. First you create the model according to what you need to use it for. Then you can plug in the numbers, and like word processing, change them relentlessly until you are satisfied with the results. TRIO CALC allows you to be as creative with numbers as TRIO WORD allows you to be with words.

BUILDING A SAMPLE

Let's build a larger sample to illustrate more of TRIO CALC's features. First, clear everything on the sheet by pressing CTRL and Q (QUIT). There are five options: to cancel the command, clear the sheet, load TRIO WORD or TRIO FILE or return to BASIC.

In this case, press #1 and RETURN to clear the present spreadsheet.

Now we will set up a simple budget program for the coming year. This could project the income and expense of either a home or business, depending on the labels you use.

ENTERING TEXT

First, let's title our sample, starting at cell r1c1. Type a capital A and you will notice that the bottom of the screen changes. You will see the TEXT prompt, indicating that the program will be accepting your input as TEXT. At the top of the screen is a reminder that in the TEXT and EDIT modes, the Function keys -- F1, F3, F5 and F7 -- can be used to move the cell pointer around the sheet. So let's continue and title the spreadsheet: ANNUAL PROJECTIONS.

Having already typed the A, now type "NNUAL PROJECTIONS." You'll see the first cell fill up with "ANNUAL PR" and the CELL POINTER move over to r1c2. "OJECTIONS" will appear in the TEXT area at the bottom of the screen. By pressing RETURN you can enter the rest of the title into r1c2 so the top of the screen reads ANNUAL PROJECTIONS. (The program will only put nine characters in a cell at a time.)

This feature is designed to remind you that when you enter text that is longer than a single cell, you might accidently overwrite whatever is in the adjacent cells if you press RETURN to continue. If you still want to enter the text but not lose the current contents of a cell, stop and rethink your format so everything fits. You might have to change the width of your cells.

CELL LENGTH

When you load TRIO CALC, each column is automatically set at a width of nine characters. You can widen or narrow any individual column as you find necessary. Thirteen additional characters can be added overall without cutting down the number of columns in the spreadsheet.

If you need to change the width of a column of cells, press CTRL L (LENGTH). Indicate how many characters you want in the column. You can have a minimum of 2 characters and a maximum of 36. Remember that you will not be able to add more than 13 characters overall without first decreasing the length of some other cells.

Let's widen COLUMN 1 to a width of 13 characters to accomodate some text. Move the pointer to Column1, press CTRL L and enter 13 at the bottom of the screen where you will see a prompt. This lengthens every cell in the column to 13 characters. You'll see the cell pointer get longer whenever it is column 1.

PLANNING A LAYOUT

Try to visualize how you will lay out your sheet. In this example, we want to list individual sources of income and expense down the left column (Column 1). Across the top, each column will be labeled by a month with a "totals" column at the far right.

```
F1-RECALC    F3-COLOR    F5-SAVE    F7-PRINT
F2-CALC      F4-BACKGD   F6-LOAD    F8-HELP
        1          2          3          4
1  PROJECTIONS
2                JAN        FEB        MAR
3  INCOME:
4    PAY
5    INTEREST
6
7  EXPENSES:
8    MORTGAGE
9    FOOD
10   TRAVEL
 r2c1          CALC on   >#  t<  no$  .00
MENU: Blank  Copy  Disk  $  @  =Edit  Formula
Go  Len  Quit  Style  Text  Value  Window ← ↑
```

First, in Row 3, Column 1, we can start by typing INCOME and pressing the RETURN key.

Go down one row, to r4c1, type PAY and press RETURN. Below that type in INTEREST and below that type TOTAL. You can experiment with indentation so that your headings read just the way you want them to.

Skip down two rows, to r8c1, and type in EXPENSES, and then enter these categories underneath each other: MORTGAGE, FOOD, TRAVEL, UTILITIES, MEDICAL, ENTERTAINMENT.

Below these categories, at r15c1, enter TOTAL. Skip down two rows and enter NET.

Now go up to r2c2. You can get there quickly by using the ARROW CRSR keys. But if you were a long way away, there is a method that moves the cell pointer instantly to any position on the spreadsheet.

THE GO TO KEY

Press CTRL and the G keys and you will be prompted to enter a cell number at the bottom of the screen. If you enter r2c2 and press RETURN, the cell pointer will move to that cell.

So, now the cell pointer should be in r2c2. In our sample we want to put the months across the top of the spreadsheet, starting here.

In r2c2, type JAN and press RETURN. Actually, for the sake of aesthetics, type three spaces first and then type JAN so it will be centered in the cell. Then move to r2c3 and type in FEB and so on through DEC in column 13 using 3 spaces to center each.

You'll notice that when you get to typing in MAY, JAN has disappeared off the left side of the screen. You are moving your window around the sheet, just like scrolling through a TRIO WORD document.

When you get to the end of the year, the last column should be labeled TOTAL.

STYLE

The best approach is to set up the style of the spreadsheet when you begin using it. You can also use this section to change the style of the sheet any time later in the program. If you do, subsequent entries will reflect the change. Also remember that whenever you edit an entry, it will be re-entered in the current style.

A menu offers these choices:

1: #left	3: text/left	5: no$	7: fixed .00
2: #right	4: text/right	6: $on	8: float

#1 and #2 will set the numbers either left or right in a cell which is indicated at the bottom edge of the sheet with the < or > and # signs.

#3 and #4 does the same for text and is indicated with the < or > and t.

#5 and #6 turn the dollar sign on and off. If on, a dollar sign will be displayed in each cell with a value in it. At the bottom of the sheet there is either a "NO$" or "ON$" reminder.

#7 and #8 indicate whether the values are displayed with decimal places or floating point as indicated by the ".00" or "flt" box at the bottom of the sheet.

MAKING ENTRIES

Now that we have the sheet formatted the way we want, let's make some entries.

In the INCOME section we have PAY and INTEREST, both probably varying amounts throughout the year. Let's say PAY is going to be the same each month, $3,000, until September when an expected raise will take effect and total monthly income will become $3,400 per month.

You can enter 3000 in cell r4c2 and that would signify that $3,000 was earned in PAY in January.

THE COPY COMMAND

You can also do the same in cells r4c3 (Feb) through r4c9 (Aug) to show that you earned $3,000 each month before the raise takes effect in September.

Here's a shortcut. You can COPY the contents of one cell into a whole range of others. You can also copy whole rows, columns or even blocks of the sheet.

But for now, let's copy the contents of the cell r4c2 to every cell from r4c3 to r4c9 or February to August. Make sure your cell pointer is in cell r4c2. Press the CTRL and C keys in order to COPY. You'll see a prompt at the bottom of the screen: COPY FROM. Enter the cell r4c2 (or even just rc, meaning "this cell") and press RETURN.

Next the prompt COPY TO will appear. To enter the RANGE ,type r4c3:9. That tells the computer to copy the January salary amount into February (column 3) through August (column 9) in the same ROW (r4).

```
F1-RECALC    F3-COLOR    F5-SAVE    F7-PRINT
F2-CALC      F4-BACKGD   F6-LOAD    F8-HELP
        1          2          3          4
1  PROJECTIONS
2                JAN        FEB        MAR
3  INCOME:
4    PAY       3000.00    3000.00    3000.00
5    INTEREST
6
7  EXPENSES:
8    MORTGAGE
9    FOOD
10   TRAVEL
 r2c1          CALC on  >#  t<  no$  .00
copy to: r4c3:9
copy from: r4c1
```

When you press RETURN you'll see that 3000.00 instantly appears in the designated cells.

In September (r4c10) through December (r4c13) you want to enter your higher PAY of $3,400 monthly. You can do so using the same procedures outlined above, Enter the 3400 in r4c10 and COPY the contents of r4c10 to r4c11:13.

COPY ROWS AND COLUMNS

A row, column or block of cells can also be copied from one place to another on the spreadsheet.

For example, if you were doing a projection into the following year, you could copy Row 2 -- The JAN through TOTAL headings -- to an area to the right of this year's projections. This would save typing these headings in again.

Press CTRL and C and at the COPY FROM prompt, enter r2c2:14. Then at the COPY TO prompt, enter r2c16:28 and press RETURN. The RANGE will be copied instantly.

To copy an entire block of cells, you simply enter the row and column range of the block to copy.

Let's look at an example. You've finished filling in all the year's income and expense projections, you might want to copy them over to next year's section of the spread sheet. Press CTRL C and enter:

COPY FROM: r4:17c2:14 COPY TO: r4:17c16:28

This will move the entire block of cells to the desginated area. It's best to fill in everything you want on your spreadsheet before moving blocks so that you move all the text, values and formulas at once.

TOTALING A ROW

Now we can enter the first formula on this spreadsheet. This formula will keep track of the amounts in each PAY cell and automatically total them up to indicate your Total Annual Pay.

We want to add up the Pay Income from January (cell r4c2) through December (cell r4c13) and put the total in cell r4c14.

First, put the cell pointer in r4c14, under the TOTAL column and in the same row as PAY. Press CTRL F to enter a formula at the bottom of the screen.

We could say that we want to add r4c3 + r4c4 + r4c5 and so on through r4c13 (January through December). Or we can do it the easy way by entering the RANGE of cells to add. The formula reads like this: rc2:13. In simple English that means put the sum of every cell from row 4, columns 2 through 13 into the cell at row4, column14.

When you enter this formula by pressing RETURN, you'll see the RESULTS, not the formula, appear in the cell.

Remember, the COLON is one of the most important punctuation marks in these formulas. It indicates a range -- from here to there.

USING A PERCENT FORMULA

Next let's fill in the INTEREST row. In January you know that you will generate $100 in INTEREST income. So enter 100 as a VALUE in cell r5c2. Each subsequent month you expect to increase the interest income by about 1%. Rather than figure this out, put a formula in the February through December cells and let the program figure it out.

Start in cell r5c3 by pressing CTRL and F to enter a FORMULA. You want to increase the $100 interest you earned in January by 1% in February so your formula should be rc[-1]*1.01 which means the value of the cell in the column to the left (r5c2) multiplied by itself plus one percent.

Of course March will be the results of February's interest plus one percent and so forth throughout the year. So what you want to do is copy the exact formula that you entered in February's cell (r5c3) to each of the other relevant cells.

COPYING FORMULAS

Copying formulas is just like copying values or text. Press CTRL and C and in answer to the COPY FROM prompt type r5c3 and press RETURN. In answer to the COPY TO prompt type r5c4:13. This means copy the formula to cells 4 through 13 in this row.

RELATIVE AND ABSOLUTE REFERENCES

We have been entering two different types of formulas into the spreadsheet so far:

Some are formulas with **ABSOLUTE** references -- that is they refer to a specific row or cell location. For example r1c+r2c means add the contents of the cells in row one and two of this column.

Others are formulas with **RELATIVE** references -- that is they refer to cells according to the cell location of the formula. For example r[-2]c+r[-1]c means add up the two cells above this one.

You need to distinguish between the two types of references whenever you copy cells, rows, columns or blocks of cells because it will affect the results of the calculations.

By using RELATIVE formulas, you can easily move a formula to another part of the sheet and it will RELATE to the cells in that part of the spreadsheet.

There are times, however, when you don't want a formula to be RELATIVE. Sometimes a formula has to refer to a specific cell or series of cells no matter where they appear in the spreadsheet. For example, there may be formulas all over the sheet which have to refer to a fixed amount in r4c1 so you would write an ABSOLUTE formula.

When you move or copy an ABSOLUTE formula, it will continue to refer to the specific cells in the formula. For example r1:10c is going to refer to the cells in rows 1 through 10 wherever that formula may be.

On the other hand, moving a RELATIVE formula actually changes the cells that are referred to. For example r[-1]:[-10]c refers to the ten rows above the formula location. If it's in the 11th row then it refers to r1:10 in the column. If the formula is in the 50th row, it refers to r40:49 in the column.

You could have entered RELATIVE or ABSOLUTE values in the PAY example above.

We added the PAY income together with the ABSOLUTE formula rc2:13, meaning add up all the values in columns 2 through 13 in this row.

This formula can be copied down the sheet to add up any series of columns 2 through 13, such as the INTEREST row.

But let's say we were doing a two year projection and had the same PAY income period for the second year -- in columns 15 through 27. We couldn't move this ABSOLUTE formula to add up column 15 through 26 (January through December) because it refers specifically to rows 2 through 13.

If we had used a RELATIVE formula in r4c14 it would have read like this: rc[-12]:[-1]. In other words, ADD every cell from r4c2 (which is 12 cells to the left) to r4c13 (which is one cell to the left).

Now we could copy that same formula into column 27 for the total of the second year PAY projections. Here it would refer to the twelve cells to its immediate left or January through December of the second year.

As you can see, ABSOLUTE formulas are fast to write and can be copied in some cases. RELATIVE formulas may be a little more complicated to work out, but they are often much more portable.

Let's look at one example where the difference between ABSOLUTE and RELATIVE formulas is important. When we calculated INTEREST income, we used a RELATIVE formula in order to copy it across the sheet. By writing rc[-1] * 1.01 as the formula, we could copy it into each cell, incrementing the value of the cell to the immediate left by one percent.

If this had been written as an ABSOLUTE formula -- rc2*1.01 -- and copied, each month's interest would be calculated based on January's interest.

We will go through more examples of how ABSOLUTE and RELATIVE REFERENCES work shortly, but let's return to the INTEREST example and see exactly what happened when we copied the formula from cell r5c3 to cells r5c4 through r5c13.

BACK TO THE EXAMPLE

The amounts in the cells are increased by one percent each month. If you look at the contents of each cell, expressed at the bottom of the screen, you'll notice that we just copied the formula rc[-1] into each cell so the formula in each refers to the cell to its immediate left.

Finally, to finish this row, we want to total each month's interest and put the contents in cell r5c14 under the TOTAL category.

As in the Pay Total above, you can enter a formula using CTRL F that totals January through December interest: rc2:13 and press RETURN. (Don't forget that the colon indicates a RANGE).

But since this is the same formula as the PAY TOTAL above, you can just copy the cell using EDIT. Move up one cell, press CTRL E to "pick up" the formula, move down one cell and press RETURN. The rc2:13 formula is installed in r5c14.

TOTAL ALL INCOME

The INCOME section also has a row of monthly totals which you can enter formulas into. You could just add up each month and enter it into the TOTAL cells but it is better to use formulas now because if any of the amounts change later, the sheet will automatically recalculate the new totals.

```
F1-RECALC    F3-COLOR    F5-SAVE    F7-PRINT
F2-CALC      F4-BACKGD   F6-LOAD    F8-HELP
        1          2          3          4
1  PROJECTIONS
2                JAN        FEB        MAR
3  INCOME:
4    PAY       3000.00    3000.00    3000.00
5    INTEREST   100.00     101.00     102.01
6      TOTAL:  3100.00    3101.00    3102.01
7  EXPENSES:
8    MORTGAGE
9    FOOD
10   TRAVEL
r6c2          CALC on  >#  t<  no$  .00

formula: r[-2]:[-1]c
```

For each month, you want to add the PAY and INTEREST cells together. For January income totals, enter the ABSOLUTE formula r4:5c in r6c2. (This could also be a RELATIVE formula: r[-2]:[-1]c.) And the same formula can be copied across the page from r6c3 to r6c14 using the COPY command.

Remember the COPY command works like this: Put the cell pointer at JAN Total (r6c2) and press CTRL C. The prompt COPY FROM appears. Enter rc and press RETURN. The prompt COPY TO appears. Type rc3:14 meaning copy the formula to columns 3 through 14 in this row.

As you can see this also takes care of adding up the TOTAL of PAY and INTEREST at the end of the year in r6c14. This cell can also be added by using the other formula we used to add total PAY -- rc2:13. It will work the same way, adding totals in row 6, columns 2 through13.

ENTERING EXPENSES

Down in the EXPENSE category, MORTGAGE is an expense that you expect to be the same every month. Your annual cost is $6,000 and you make payments of $500 every month. But let's approach this entry differently than the last ones.

Your monthly mortgage cost is really 1/12 of your annual total. Enter the 6000 Yearly MORTGAGE expenses in r9c14 (TOTAL). Then go back and enter a formula in each cell from r9c2 (January mortgage expense) through r9c13 (December mortgage) that reflects 1/12 of the annual payment.

Each cell would contain the formula: rc14/12. That is the TOTAL Yearly Mortgage cell divided by 12.

MORE EXPENSES

The next EXPENSE items (FOOD, UTILITIES, MEDICAL, TRAVEL and ENTERTAINMENT) are expenses that vary each month so you can estimate these amounts and enter them as VALUES each month. Then in column 14 you can enter a formula that will total these cells.

Here are two formulas you could enter into the TOTAL cells:

RELATIVE: rc[-12]:[-1]
ABSOLUTE: rc2:13

Often you will find yourself budgeting each item according to acknowledged price patterns. TRAVEL costs, for example, are traditionally higher in the summer due to vacations and ENTERTAINMENT costs may be more in during December due to the holiday season.

As the year progresses and you update categories to accurately reflect these expenses, the TOTALS and the entire sheet will be automatically updated because you have entered formulas that are flexible.

TOTAL EXPENSES

Just as you set up a formula to calculate TOTAL INCOME or PAY by month, you'll want to enter a similar formula that will add up each expense and put monthly totals in Row 15.

First build a formula for January. With the cell pointer at r15c2, press CTRL F. The ABSOLUTE formula would be entered as: r9:14c. Or the RELATIVE formula would read: r[-6]:[-1]c. Next press RETURN to enter the formula in r15c2.

Now you can copy either formula into all the other monthly columns. Press CTRL C to COPY. When prompted COPY FROM enter r15c2 and press RETURN. When prompted COPY TO enter rc3:13 and press RETURN.

This will copy January's formula into all the other months in the row. If you look at r15c5 you'll see that it has the same formula as r15c8.

TOTAL ANNUAL EXPENSES can be the total of the six expense cells above or the 12 total expense cells to the left. It's up to you.

THE BOTTOM LINE

That leaves one final row -- the NET INCOME -- undefined. Each cell in this row would be the difference between TOTAL INCOME and TOTAL EXPENSE. So in January NET the ABSOLUTE formula should read: r6c-r15c. You could also use a RELATIVE formula: r[-11]c-r[-2]c which means the value of the cell 11 rows up minus the cell two rows up.

Either formula can be copied across the rest of the year including the TOTAL NET INCOME cell -- r15c14.

ADDITIONAL EXAMPLES

Here's some more examples of how RELATIVE and ABSOLUTE formulas are written:

ABSOLUTE	RELATIVE	
r1c+r2c	r[-2]c+r[-1]c	ADD
r1c-r2c	r[-2]c-r[-1]c	SUBTRACT
rc5*rc8	rc[+3]*rc[+4]	MULTIPLY
r1c/r5c	rc[-3]/rc[2]	DIVIDE

MIXING RELATIVE AND ABSOLUTE REFERENCES

If necessary, you can also mix formulas.

Here is an example of using a MIXED REFERENCE rather than strictly a RELATIVE or ABSOLUTE REFERENCE: rc4+r[-3]c.In this case you are adding the contents of column 4 in the present row with the contents of the cell three rows up in the same column.

MATHEMATICAL FUNCTIONS

There are a number of advanced mathematical functions available that can be used in formulas such as Square Root, Logarithm, Absolute Value, And, Or, Not, etc. All of these functions and operators act the same way as they do in BASIC.

These are covered at the end of the DEFINITION OF TERMS section of TRIO CALC.

WHEW! A SPREADSHEET...

So that just about covers the process of actually setting up a spreadsheet for a specific purpose. It might seem like a considerable task just to add and subtract a few numbers, however now that your sheet is set up and the formulas are in place, you can adjust and project to your heart's content. Once you have saved the sheet, you can always retrieve it later in order to make adjustments. And once you're all set up, the analysis can begin.

As you can see, planning is the most important part of setting up a spreadsheet. You need to carefully determine what you need to analyze, then design your layout and figure out the best way to construct formulas so they will accurately calculate changes.

But if you find that you haven't set your spreadsheet up to do what you want, or if you've left something out, there are features in TRIO CALC that allow you to modify, revise, edit or overhaul it anytime.

EDITING

You will need to make changes from time to time and the EDITING command makes these changes easy. EDITING is similar to the way you EDIT text in TRIO WORD because some of the keys used are the same.

EDITING is also the method you'll use to try various "what if" situations -- what if income goes up, expenses go down, interest rates change, etc. By EDITING the formulas, you can find out instantly.

Place the cell pointer on a cell that contains an entry and press the CTRL and E keys. Or you can simply press the = (equal sign).

You'll see the contents of the cell displayed at the bottom of the screen. If you've stored text or a value, what appears will look the same as the cell. If there is a formula in the cell, the formula will be displayed below. In any case, the flashing cursor at the beginning of the cell contents means you are ready to edit.

MOVE THE CURSOR TO EDIT

Whenever you enter the EDIT mode you can move the cursor to the right by pressing the CRSR key with the arrows and move it left by pressing SHIFT and the CURSOR key.

Move the cursor to the place where you want to make a change and type it in. Notice that you strike over whatever is under the cursor.

Also, the top of the screen reminds you that you can move the cell indicator around in this mode using the Function keys.

INSERT AND DELETE SPACES

The INST/DEL key is used for editing as well. Just like in TRIO WORD, pressing the key will DELETE anything to the left of the flashing cursor if you are in the EDIT mode. By pressing the SHIFT and INST/DEL keys simultaneously, you activate the INSERT mode and can add spaces to the right of the cursor.

Once you have made your editing changes, just press RETURN and the cell will change instantly.

Let's go back to the sample sheet we set up to illustrate both an editing and a spreadsheet point.

What if you realized that your INTEREST income was actually increasing by 2% per month instead of 1%? How would that affect your total income and your net income for the year?

Go to r5c3 (February interest) and press CTRL E for EDIT. The formula is displayed at the bottom of the screen. Go over to the 1.01 using the CRSR key and put the cursor on top of the second 1 that signifies 1%. Now change that to a 2 (just press the 2 key) and press RETURN.

Instantly the sheet changes. You've earned more interest in February and that has increase your Total Income and Net Income. Now let's change March through December and see how that affects the TOTALS. Instead of editing each cell entry, you can just re-copy February's formula using the COPY command.

As you can see, with the cell editing capabilities, you can make instant changes to your financial projections.

INSERT ROW OR COLUMN

When you are not in the EDIT mode, you can insert an entire row or column into the spreadsheet, using the INST/DEL key and SHIFT.

This feature is used for situations where you need to add a row or column of information without having to erase or move a block of cells.

First, move the cell indicator to the row or column where the insert will be made. Press SHIFT and the INST/DEL key.

You'll be prompted to enter whether you want to INSERT a:
1.) ROW or 2.) COLUMN. Press either number to continue or press 0 to cancel the operation.

If the spreadsheet has a lot of information on it, the program may take from 10 to 30 seconds to actually move everything around. So don't be concerned if the display seems to be on "hold" for longer than usual.

THE BLANK KEY

To blank the contents of a cell or series of cells, press CTRL B and indicate the specific cell or cells. You can erase a row, column or block of cells by entering the range to BLANK.

For example, to erase column 2, enter r1:60c2 and the entire row will disappear. If the cell indicator is in column 2 then you only need to enter r1:60c. To erase a block (or any portion of a column or row) enter the row and column range. For example, you would enter r1:60c1:4 to erase that block.

CREATING A WINDOW

When your labels or headings are in Column 1 and you are looking at totals in Column 13, sometimes you can get confused as to what a particular number is the total of, without actually going back to Column 1 to check.

The WINDOW feature allows you to show a COLUMN at the left side of the screen or a ROW at the top. Press CTRL W and indicate the column or row that you wish to display as a window. Then you can move anywhere on the spreadsheet and display the designated row or column with these keys:

The UP ARROW key (right, top) will display a designated row as a window across the top of the screen.

The LEFT ARROW (left, top) will display a designated column as a window at the left side of the screen.

Using the sample "Projections" spreadsheet we created, define Column 1 as a window (r1c1 is the default). Then move over to Column 13 and press the Left Arrow key. Column 1 will be displayed in the far left column of the screen and if you position Column 13 next to it, you can see how it makes it easier to read the sheet.

OTHER IMPORTANT KEYS

MOVING AROUND THE SCREEN

If you recall from using TRIO WORD, there are a lot of alternate methods for moving around your document, each suited to different situations.

Some of the same keys are used with TRIO CALC.

CLR/HOME KEY

HOME -- Pressing it once moves the cell pointer to the top left corner of the present screen. Pressing it twice moves it to the top of the spreadsheet.

CLR (SHIFTED) -- Pressing it once moves the cell indicator to the bottom right corner of the screen. Pressing it twice moves it to the bottom of the spreadsheet.

INST (SHIFTED INST/DEL) -- will insert an entire row or column into the sheet. Remember, press SHIFT and INST/DEL key and designate whether to insert a row or column at the cell pointer location.

SHIFT and **SHIFT LOCK** -- as you undoubtedly know, this key gives you upper case letters (and access to half the Function keys).

RUN/STOP -- This VERY IMPORTANT key, located on the left side of the keyboard, is your ESCAPE key. Whenever you are doing something and you want to back out -- just press RUN/STOP. This key will take you back to the standard menu operation of the program. (Press RUN/STOP twice if you are in a HELP window.)

CTRL QUIT -- This option allows you to stop working on your spreadsheet and go to one of the other TRIO programs on the disk. When you press CTRL Q you'll be asked if you want to SAVE the current data before quitting (Answer Y or N). The screen will display a menu with the choice of clearing the present sheet or loading TRIO WORD or TRIO FILE or returning to Commodore BASIC.

THE FUNCTION KEYS

Now that you have set up a sample spreadsheet, there are some other keys you'll want to use when you are working with a sheet: The **FUNCTION KEYS.** These keys are located on the right of your keyboard and are marked F1, F2, etc.

F1: RECALC -- When the "CALC on" indicator (located at the bottom of sheet) is on, TRIO recalculates every formula on the entire sheet each time you make a change.

Normally, then, you won't need to use RECALC. But, it you should ever turn off the automatic recalculation (see below), you can then use RECALC whenever you to update the sheet. The recalculation feature lets you execute single calculations without having to turn the automatic recalculation back on.

F2: CALC ON/OFF -- Every time you make an entry, the program automatically goes through every formula on the sheet and updates the values.

F2 is a toggle switch which allows you to shut off the automatic recalculation of the spreadsheet and then turn it on again later. When you have a lot of formulas on the sheet, it can take a few seconds to recalculate the sheet each time you make a change. If you are making a lot of changes, turn the calculator off, make all the changes and press F1 to RECALC only when you need to. You'll save a lot of time this way.

NATURAL ORDER OF RECALCULATION

TRIO CALC uses the "natural order of recalculation" to update your spreadsheet whenever you make changes. This means that the program works the way you would if you were doing these calculations by hand. It finds the formula that must be calculated first (in order to proceed with the other calculations) and evaluates it. This feature ensures that the program doesn't simply calculate by row or column without adjusting for the way you have structured your formulas.

THE CHICKEN AND THE EGG

Occasionally, you'll run into a situation in which you've created a CIRCULAR REFERENCE. This means that a cell is dependent on itself for a result.

For example, you want to figure out how much money to borrow for your business. This is based on a series of formulas that sums projected INCOME and subtracts from it projected EXPENSES in order to determine how much money will be borrowed to cover expenses.

However, one of your expense categories is called INTEREST COSTS. This category is based on a formula that takes the amount you plan to borrow, figures out the interest and puts it in the row.

So, you are trying to figure out how much to borrow based on your expenses **but** one of your expenses is the amount of interest you'll pay **and** that amount depends on how much you borrow. We'll refer to this classic paradox as a CIRCULAR REFERENCE. That phrase will appear at the bottom of the screen when it happens.

Correcting the problem entails restructuring your format a little. Break out your interest costs from your other expenses so the program can calculate your expenses. Then determine how much your loan will be, allowing for interest. then, calculate the interest expense as an additional line and subtract it from \the amount you have left after expenses.

If you get a "Circular Reference" message, go back to the formulas you've entered and see where the problem may lie. If, for example, you are in a particular row and three cells next to one another all refer to each other (rc[+1] + 100; rc[+1] * 2; rc[-2] + 10), the program will never be able to determine even one of the cell's value. You'll have to use the EDIT function to rearrange your formulas so that they don't create a circular reference.

F3/F4: CHANGE COLORS -- Just as you can in TRIO WORD and FILE, you can change the text and number colors (F3) and the background colors 9F4). If everything disappear s, it's because you have chosen the same background and foreground color. Don't panic; just change one or the other.

F5: SAVE -- Once you have created a spreadsheet, you'll want to SAVE it. Not only can you save your finished spreadsheet (to retrieve later for editing purposes), you can save spreadsheet "shells". These "shells" can be retrieved anytime, filled in, and resaved under another name. This is useful if you've created a form or "template" that you can use in a variety of different situations.

Press the F5 key and you'll be prompted to enter a name of up to 16 characters.

At this point, you'll need to put a formatted disk in your drive to store your data . A special formatting routine is included in the DISK SECTION.

To view the names of all the files you have on disk, press the SHIFT and $ key (or CTRL and 4).

DISK MAINTENANCE SECTION

By pressing CTRL and the D key (for DISK), you'll access a section of the program that allows you to make changes in the files that contain your spreadsheets. You can use any of the commands found in the Commodore disk drive manual.

Erase a file by typing: s0:filename

Rename a file by typing: r0:new name=0:old name

Format a blank disk by typing: n0:disk name, ID. (The ID number must be two digits.) Remember when you format a disk, it erases any information that exists on it so format with care. Also, the disk should NOT have a write protect label on it.

F6: LOAD -- To retrieve any of your previously saved spreadsheets, press F6 and enter the EXACT file name in the prompt area. Press RETURN.

If you don't remember the file name, use the SHIFT $ (or CTRL 4) feature to list the names of the files on the data disk.

F7: PRINT -- This will allow you to first enter information about how you want to print your spreadsheet and then send the data to your printer. It will also convert your TRIO CALC files to TRIO WORD for integration.

When you press F7, a window appears on the sheet and the bottom displays a PRINT menu:

1. SET BLOCK -- Since the spreadsheet is larger than a piece of paper, you need to set a block of cells to be printed on a page that exceeds neither the width nor length of the paper. (A standard piece of paper holds 80 characters edge to edge and is 66 lines long, top to bottom.)

Set a block by pressing 1 on the menu and entering a block of cells. For example, if you enter r1:50c1:8, the program would print the first 50 rows by eight cells across.

2. PRINT BLOCK -- This will print out the block you selected above in #1.

3. CHANGE SETTINGS -- This choice allows you to change a number of values. The defaults are the most common settings.

Change the number of characters printed on a line. The default is 72 and standard paper will print 80 characters edge to edge.

Change the Secondary Address, Device number or File Number of your printer. Most printers use these default values. If your printer doesn't respond, check the operating manual to see how it should be configured.

4. CREATE A TRIO WORD FILE -- In this section, you will be translating the selected block into TRIO WORD files. These files can be integrated into other TRIO WORD files or LINKED together using the TRIO LINKING CHARACTER. You can put your financial information directly into text reports without having to load both programs separately.

When you merge a TRIO CALC data file with TRIO WORD, it will be saved a s a TEXT file. This means that you can use all the printing features available in TRIO WORD.

When prompted, enter a "print-to-disk file name." This is the name you'll use when relocating the file once you're in TRIO WORD.

When saving, remember that the block width should be compatible with the TRIO WORD files you will be adding on to. For example, if you save a block 80 characters wide but print TRIO WORD defaults to 65 characters wide, the spacing will be off.

F8: HELP -- This section provides you with specific information about the program's operation.

You must have the TRIO Master Disk in the drive in order to get HELP information.

Pressing a number will display the topic that you select. Press RUN/STOP to return to the Main Help Menu. Press it again to return to the spreadsheet where you left off.

WRAPPING CALC UP...

That, in essence, is TRIO CALC.

The next section contains DEFINITIONS OF TERMS, a glossary which covers each function.

TRIO CALC
DEFINITION OF TERMS

All of TRIO CALC's features are accessible through the function keys displayed at the top of the screen and through the key words displayed on the bottom of the screen.

FUNCTION KEYS

F1: RECALC -- Choose to recalculate the spreadsheet. The formulas are calculated according to how they were entered. An error message will occur if the program encounters a CIRCULAR REFERENCE. This occurs when two formulas contain each other as a variable, but each also require the results of the other in order to calculate their value.

F2: CALC ON/OFF -- This is a toggle switch that turns the automatic recalculation of the spreadsheet on or off.

When loaded, the recalculation is 'ON'. Pressing the F2 key turns it off (as designated at the bottom of the screen).

F3: CHANGE TEXT COLORS -- Sixteen different colors are available for text.

F4: CHANGE BACKGROUND COLOR -- Change the page color as well.

F5: SAVE -- Sends spreadsheet data to the disk drive for later retrieval.

You can format a disk by using the CTRL D (DISK) key feature.

F6: LOAD -- Retrieve any previously saved spreadsheet by pressing the F6 key (SHIFT and F5) and entering the EXACT file name under which the data is stored.

F7: PRINT -- Access print commands. When you press F7, a menu is displayed:

1. SET BLOCK -- Set a block of cells to be printed on a page that exceeds neither the width nor length of the paper.

2. PRINT BLOCK -- This will print out the block selected in #1.

3. CHANGE SETTINGS --This choice allows you to change a number of values:

Change the number of characters printed on a line. The default is 72. Standard paper holds 80 characters edge to edge.

Change the Secondary Address, Device Number or File Number of your printer.

4. CREATE A TRIO WORD FILE --Translate the selected block into TRIO WORD files which can be integrated into other TRIO WORD files or LINKED together using TRIO LINKING CHARACTER.

F8: HELP -- Insert the TRIO Master Disk into the drive, press F8, and select a number corresponding to the information you seek about the program's operation.

When you choose a HELP instruction, the program will load the relevant information and display it in an overlay "window" on the screen.

CONTROL KEY WORDS

Pressing the first letter of the key word will activate the mode.

CTRL B: BLANK -- Erase the contents of any cell or block of cells.

CTRL C: COPY -- COPY the contents of a cell, row, column or a block to another part of the sheet.

To copy a CELL, press the CTRL C key. A COPY FROM prompt will appear. Indicate the cell, and press RETURN. (i.e. r5c) In answer to the COPY TO prompt, indicate the cell or range you want to copy to and press RETURN. (i.e. r20c2:12) The contents of the original cell will be duplicated in the new cell or cells.

To copy a ROW or COLUMN enter the range to copy (i.e. r6c1:14). Then after the COPY TO prompt, enter the destination ROW or COLUMN (i.e. r22c1:14).

To copy a BLOCK, use the same technique as above but designate the range of the block. Designate the row range and the column range. For example, COPY FROM: r4:17c2:14 and COPY TO: r4:17c16:28.

CTRL D: DISK - Erase or rename selected files, format new disks or use any other Commodore disk commands. Instructions are found in the 1541 drive manual.

To ERASE a file, type: s0:file name
To RENAME a file: r0:new name=0:old name
To FORMAT a new disk: n0:disk name, ID

CTRL E: EDIT - Place the indicator on the cell to EDIT and press the CTRL and E keys. Or simply press the = key. The contents of the cell will appear in the message area below.

The **CRSR** keys are used to move the cursor left and right for editing.

When EDITING, the **INST/DEL** will delete a character to the left of the cursor. Press the SHIFT key and INS/DEL to insert a space to the right of the cursor.

Corrections can be made right over the original text/numbers. After the correction is made, press RETURN.

In the EDIT mode, move the cell indicator around the spreadsheet by using the F1, F3, F5, and F7 keys.

CTRL F: FORMULA -- Pressing the CTRL and F keys indicates that you want to enter a formula into a cell. Formulas can be entered using cell references and standard mathematical equations.

Two types of formulas exist: those that use RELATIVE REFERENCES and those that use ABSOLUTE REFERENCES.

An example of a formula with RELATIVE REFERENCES is: r[-5]c+r[-1]c. This means the cell that contains this formula is actually the sum of the cell which is five rows above in the same column and the cell which is one row above in the same column.

Because it is RELATIVE, the formula will "relate" to the cells five rows and one row above in the same column - regardless of which cell it is moved to.

An example of ABSOLUTE REFERENCE is r1c1+r2c4. This refers to specific cells. If the formula were moved to another cell, it would still refer to these particular cells.

Cell references can also be MIXED when necessary.

CTRL G: GOTO -- This can be used to jump the cell indicator to any cell on the spreadsheet. Press CTRL G and enter the cell designation.

CTRL L: LENGTH -- Change the width of any columns. Press CTRL L and enter the number of characters (2-36) that you want the column to be and press RETURN. Remember that generally you'll have to narrow a column before widening another, since the program can only accept 13 extra characters overall without an actual change in cell (and therefore column) size.

CTRL Q: QUIT -- Pressing the CTRL Q key provides you with a menu where you can either blank the sheet or return to TRIO WORD or TRIO FILE.

You should SAVE your work onto a data disk before you QUIT. (See F5:SAVE).

CTRL S: STYLE --Choose the way text and numbers are displayed when they are entered.

You can choose to display values flush right (standard) or left .

You can choose to display text flush left (standard) or right .

Choose to have $ automatically on or off. And select whether to have two decimal points or floating point numbers displayed.

CTRL T:TEXT -- Indicate the entry of text. If you type a letter as the first character in a cell, the program automatically accepts the cell entry as text - there's no need to press CTRL T first. Use CTRL T to enter numbers as text so that they will not be expressed as values.

CTRL V: VALUE -- If the first character you enter in a cell is a number, the program assumes the entry will be a VALUE so it's not necessary to press CTRL V first. Use CTRL V especially when you want to enter text (mathematical notation, for example) as a value.

CTRL W: WINDOW -- This feature lets you set an overlay window (by column or row) for easy viewing of a label, heading of block of numbers that is far away from your work space. You can then move anywhere on the sheet and display the designated row or column with these keys:

The UP ARROW (right, top) will display a ROW window across the top of the screen.

The LEFT ARROW (left, top) will display a COLUMN window at the left side of the screen.

These windows are only displayed while the keys are depressed.

OTHER KEYS:

CTRL INST/DEL -- By pressing the SHIFT key and the INST/DEL key, you can INSERT an entire row or column into the spreadsheet.

CLR/HOME-- Located at the right top of the keyboard, this key jumps the cell indicator around. When you press the key, it acts as the HOME key and moves the cell indicator to the top left corner of the display screen. Press again to move it to the beginning of the sheet.

When you press the SHIFT key and CLR/HOME, you activate the CLR mode which jumps the cell indicator to the bottom of the screen. Press again to move it to then end of the sheet.

CRSR KEYS -- These are the keys with the up, down, left, and right arrows located to the right of the space bar. Use them to move your cell indicator around.

SHIFT and SHIFT LOCK -- These keys give you upper case letters and let you access the even numbered function and other keys.

RUN/STOP -- This key is located on the left of the keyboard. Whenever you are doing something and you change your mind, press RUN/STOP to stop the operation and move you back to the standard screen.

$ -- Press SHIFT and 4 and the disk directory will load showing the names of all the files on disk.

@ -- Press the @ key to display the disk error channel.

EDIT MODE

= EQUAL SIGN -- Use to enter the EDIT mode, same as pressing CTRL E.

CRSR -- Move the cursor within the contents of the cell to edit.

INST/DEL -- In the EDIT mode, press the INST/DEL key to DELETE a character to the left of the flashing cursor. Press the SHIFT key and this key to insert spaces to the right of the flashing cursor. Once you've inserted the spaces, you can type in them. Otherwise, you will type over existing text.

FUNCTION KEYS -- In the EDIT mode, F1 moves the cell indicator UP; F3 moves it LEFT; F5 moves it RIGHT and F7 moves it DOWN.

FORMULA SYMBOLS

These symbols are used with cell references to create formulas:

+ -- ADD. For example, r1c+r2c indicates that the values in cell r1 and r2 will be summed.

- --SUBTRACT. Numbers or cells can be subtracted as well, as in the case of r4c-r8c.

*** --MULTIPLY.** The asterisk signifies multiplication of cells, numbers, or both. For example: r4c5*2.

/ --DIVIDE. The slash will divide the first cell value or number by the second as in the example r8c5/4.

( ) --FIRST. This sign gives precedence to the formula within the parentheses.

: --RANGE. The colon indicates that a formula contains a range of cells. For example, r1:10 indicates all the cells from Row 1 through Row 10.

MATHEMATICAL FUNCTIONS

There are a number of advanced mathematical functions available that can be used in formulas. All of these functions and operators act the same way as they do in BASIC:

exp:	e raised to a power (e=2.71828)
log:	natural logarithm (base e)
cos:	cosine trig function
sin:	sine trig function
tan:	tangent trig function
atn:	arc tangent trig function
sqr:	square root (example: sqr (9))
sgn:	arithmetic sign
int:	integer part of number
abs:	absolute value of number
and:	binary logical and operator
or:	binary logical or operator
not:	binary logical not operator
> = <	boolean inequality operators

TRIO FILE
The File System

QUICK START REFERENCE SHEET

KEY COMMANDS:

FUNCTION KEYS:

F1: ADD A RECORD TO THE FILE
F2: EDIT AN EXISTING RECORD
F3: ACCESS A FILE ON DISK
F4: CHANGE TEXT AND BACKGROUND COLORS
F5: SEARCH FOR RECORDS
F6: PRINT RECORDS
F7: CREATE A NEW FILE
F8: HELP SCREENS

CRSR KEYS: MOVE CURSOR WITHIN A RECORD

INST/DEL: DELETE TEXT IN A RECORD

CTRL D: DISK COMMANDS
F = FORMAT
C = CHANGE FILE NAME
$ = DISK DIRECTORY

CTRL P: CHANGE PRINTER SETTINGS

CTRL S: STOP (CANCEL) ANY FUNCTION

COMMODORE KEY & Q: QUIT TRIO FILE SECTION

TRIO FILE
The File System

Perhaps the easiest program to master among the TRIO programs is TRIO FILE. This is a very simple-to-use, highly flexible file manager (or data base) which allows you to store many different records in all types of formats.

TRIO FILE can keep records of almost anything you can think of. It can be used as your phone or address book. It can keep track of your possessions, assets, or prized collections. Or it can be set up to store any type of records you need.

TRIO's filing system is as flexible as you design it to be.

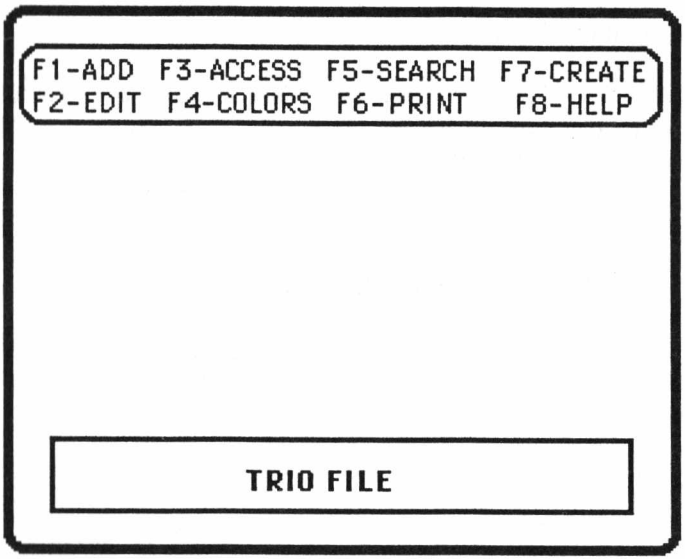
LOADING TRIO FILE

Like TRIO WORD and TRIO CALC, TRIO FILE can be loaded from the master disk or from one of the other programs. Be sure that the Master disk is inserted into the drive, that the door is closed, and that your computer is turned on and ready.

Type LOAD "TRIO",8,1 and press the RETURN key. The drive will run and within several seconds, you should see the Main TRIO Menu on screen.

Choose #3 to load TRIO FILE.

When TRIO FILE is loaded, you will see a screen somewhat similar to TRIO WORD. At the top are permanently displayed FUNCTION key prompts; at the bottom is a message line. The middle of the screen is where you will design the file's format.



Before you create your file, you should remove the TRIO master disk and insert a blank disk in your drive. You will prepare this disk to store your files.

Be sure the blank data disk does not contain any files you want to keep because the preparation procedure will erase the current contents. Also be sure there is no "write protect" label on the disk.

Press the CTRL key and the D (for DISK) key. The message center below asks you to enter the command you want. Enter F for format and then, when prompted, enter the disk name and ID number.

Type a name up to 15 characters long in the message center and press RETURN. Then enter a TWO DIGIT disk ID number and press RETURN. The drive will grind away for a minute or two as it prepares the disk for information storage.

When the drive is finished (the red light goes off), leave the newly formatted disk in the drive. As you enter information, it is immediately saved and written onto the disk. Therefore, the disk must stay in the drive.

The DISK COMMAND section also has two other features. By pressing CTRL D and then entering a C in the DISK COMMAND box, you can change a file name.

Enter the old file name, and as prompted, the new file name. Then, place the DATA disk with the files on it into the drive and press C to continue.

If you press CTRL D and enter a $ (shifted 4) into the DISK COMMAND box, the disk's directory will load into a window on screen, showing the exact names of all the files on the disk. (Often you'll see two versions ofthe same file name, e.g. test1 and test1.d. The second file name is a particular kind of file for the program's use. You won't be able to access it, and you shouldn't worry about it.)

CREATING YOUR OWN FORM

How are you going to use TRIO FILE? What do you want it to do for you? Once you've answered these questions, you'll be able to build your own personalized record-keeping system.

First, let's create a standard NAME AND ADDRESS BOOK.

Each time you enter a complete name, address, and phone number, etc., you will be creating a RECORD. A RECORD is made up of many FIELDS, or categories of information that you define.

TRIO FILE allows a maximum of 17 FIELDS in a RECORD.

Within each FIELD, you can also designate how many characters will be allowed. The maximum is 29 per field.

Each character in a RECORD takes up space on your disk. Fewer characters in a RECORD mean that more records can be stored on a disk. If you use only the amount you need and no extra, the disk will be able to store more records.

To create a new format, press the F7 key. A message appears in the center of the screen: "File create section will clear current field data." If you have a file already loaded in the computer, it will be cleared out. It will still exist on your disk, however. At this point, you have no files stored in the computer, so press Y to continue.

Next, enter a FILE NAME that will describe this set of RECORDS. You can have many different files, each with their own structure for storing different types of records. Enter a name of up to ten characters, and press RETURN. For our sample format, type in **the sample** as the name, and press RETURN.

You will see a form appear on screen with 17 lines. This is how you set up the skeleton of the format.

Note the little > next to the 1. This is your first FIELD, and you can name it anything you want (up to seven characters). Let's call this one **fname** and press the RETURN key.

The > jumps to the next column which is where you designate the maximum length of the **fname** field. It will appear in lower case letters. Most first names will fit in under 10 characters, so enter 10 and press RETURN.

As you can see, the > is on the second line waiting for you to name this FIELD. Let's call it **lname** and make the length 12 characters.

For our sample you should fill in the rest of the fields as follows:

FIELD 3	firm	20 CHARACTERS
FIELD 4	street	15 CHARACTERS
FIELD 5	city	10 CHARACTERS
FIELD 6	state	10 CHARACTERS
FIELD 7	zip	5 CHARACTERS
FIELD 8	phone	14 CHARACTERS
FIELD 9	type	10 CHARACTERS
FIELD 10	memo	10 CHARACTERS
FIELD 11	spouse	10 CHARACTERS
FIELD 12	sales	8 CHARACTERS

The total number of characters in all the fields cannot exceed 230, so keep track of the total as you enter your fields. You may want to plan out your structure on paper first.

Now you can see on screen what your format is going to be for all your NAME AND ADDRESS BOOK files. If you made any mistakes you can move the > up and down the format, using the CRSR keys, to make corrections. When finished, press the F1 key to exit.

The screen asks if this is correct. If you want to change the format, now's the time. Answer N and you'll be given prompts to edit any of the fields until you have it the way you want it.

If the answer is yes, the drive will record the format on your file disk which you prepared earlier. Be sure to have your formatted data disk in the drive at this point.

ACCESSING A FILE

As mentioned earlier, you may set up a number of different file formats for different applications. Some may have only 5 fields while others may require the full 17. Each has a name, such as THE SAMPLE, which you use to access the files stored in the file format.

Pressing the F3 key prompts you to enter the name of the file format that you want to load. If you wanted to retrieve the files in the format that we set up earlier, you would type THE SAMPLE here and press RETURN.

The program will find the file format and display the name at the top of the screen. If the file format is not found, you'll get a message to that effect. Check your name again and be sure to type it EXACTLY the way you SAVED it.

ADDING FILES

The major features of the data base are accessible by using the FUNCTION KEYS on the right side of the keyboard, just like TRIO WORD.

Now that you have a form created to store RECORDS, the first (and most frequent) thing you'll want to do is ADD some RECORDS to this form. So press the F1 key.

You should see the format you created on screen with the first file name displayed.

Start by putting a name like Donald in the first line, press RETURN and the length (15) and press RETURN. The cursor jumps to the next line. Enter his last name: MacDonald, and the length (20)and RETURN.

Continue the record by entering the name of the company that Donald works at, the street, city, state (two letter abbreviation), zip code, phone number (with area code), the type of company and, if you want, a short memo about your friend Donald, his wife's name and the amount of sales he did this month. You don't have to enter information in every field. Just press RETURN to skip a field.

When you have finished entering information into the RECORD, the message center prompts: IS THIS CORRECT? If you answer N, you'll be able to make corrections.

If you enter Y, the information will be written onto your file disk and the entry screen will clear to make way for the next RECORD. Note that you can stop making entries anytime by answering N to the prompt "Another Entry (Y/N)"

EDIT RECORDS

By pressing the F2 key, you'll enter the EDIT MODE which allows you to retrieve any record and change any of the existing information. You can also DELETE an entire record in this section.

The F2 EDIT section also contains a "program within the program" called SORT and MODIFY. Because this is basically a separate program, the first question you'll be asked when you press F2 is "Do you wish to Sort Entire File and/or Modify Field Structure?" Answer Y(es) to continue with this routine; answer N(o) to return to the main editing screen.

Edit

If you've answered "No" to the above question, you'll enter the EDIT mode. To edit a record, you'll have to search for it first. The format of your records will be displayed along with the field numbers, names and lengths.

First enter the number of the field you would like to search. If you wanted to change Donald MacDonald's RECORD, you would enter field #1 for search and type his name in at the prompt. The program would then go to your data disk and display the full information for any record that met the search criteria.

Now press any key as prompted. You'll be asked if you want to DELETE the record. Answer Y or N, **BUT DO NOT PRESS RETURN.** (Answer No to continue editing.) Next you'll be asked if you want to UPDATE the record. Again answer Y or N, **BUT DO NOT PRESS RETURN.** If one of these prompts does not appear, it's probably because you pressed RETURN after responding. In this section, doing so will only cause the program to skip a prompt.

Answer Y(es) to EDIT. (No will take you back to the main screen.) Move the cursor to the field you wish to change by using the ARROW CRSR KEYS (next to the space bar). Type in the new field information in (it will appear at the bottom of the screen), and press RETURN.

When you have finished making changes to the record, press F1 (as prompted) to indicate that the edit is complete. The changes will then be updated on your data disk (make sure it is in the drive).

You can retrieve RECORDS by searching any field. Suppose you can't remember Donald's name or his company but you remember that he is a baker. If that fact was entered in the TYPE field, search your TYPE field for all the baking companies.

What if you have more than one baker in your file? When the first one is found and it's not the one you wish to update, answer NO to the UPDATE THIS RECORD? prompt. The program will display the next file that meets your search criteria until you find the record you want.

Sort & Modify

If you answered Y(es) to the "Do you wish to Sort Entire File and/or Modify Field Structure?" question, you'll then be prompted to insert the master (TRIO) disk and press C. A "please wait..." message will appear.

It takes a few seconds for this "program within the program" to load. A description of the Sort & Modify feature will appear. Press C to continue or R to return to the main program should you decide you want to cancel this choice.

Now put your data disk in, enter the name of the file you want to sort or modify, and press the letter of the field you want to isolate. (There will be letters displayed next to each field name; use these letters while in this section to reference your fields.)

You are asked one more time if this is the field you want to sort by. "No" gives you the option to specify the field again. "Yes" signals the program to continue. The program will now sort (alphabetically or numerically) the field you indicated and display the new order. Often this display is very brief, since the program is sending each record to the drive as you see it. If you want a full listing of the displayed file, you can print it out later.

You will next be asked if you want to modify the structure of the fields in your file. If you answer No, the program automatically stores the resorted file as a new file (you'll be prompted for a file name) and returns you to the main program.

If you answer Yes, you'll be given a new screen that gives you the options of altering field lengths (F7), altering field names (F5), or verifying that the changes are complete (F1). You cannot alter the length of a field to a smaller number.

Once you verify that the changes are complete, the program will then store the newly modified (and sorted) file and then allow you to return to the actual TRIO FILE program.

CHANGE COLORS

As with TRIO WORD and TRIO CALC, you can change the background and text colors of TRIO FILE by using the F4 key (SHIFT and F3). Once you've entered the CHANGE COLORS mode, the F1 key changes the BACKGROUND and the F3 changes the CHARACTERS. F7 returns you to the menu.

Press the keys repeatedly to run through the entire spectrum. Remember, once in a while everything seems to disappear because you have the same background and text colors. Don't panic; simply adjust the colors so that they aren't the same.

SEARCH FILES

Many times, you will need to search through the files to find a file or group of files. Press the F5 key to search for a range of RECORDS.

Answer Y to "PRINTER OUTPUT" if you want to dump the files you find to your printer. Otherwise, answer N.

Searching for a RECORD here is the same as the search you did in the EDIT section.

The message center says ENTER ITEM FIELD NUMBER. Enter the number of the field you want to use for the search and press RETURN. For example, to find Mr. MacDonald, you'd want to search the NAME field -- Field 1. Then you enter the name.

There are numerous ways to search for information. For example, if you wanted to search for all the companies that start with R, just put R in the search box and the program will find every record in field 2 -- COMPANY -- which begins with an R.

To find everyone on the list living in New York, enter that in Field 5 -- CITY. To find all the Bakers on your list, enter that in Field 8 -- TYPE.

The program will search the disk and display each record you are looking for.

If you want to view all your records, enter an * for search (you can choose any field). This will allow you to view each record, one by one.

PRIMARY & SECONDARY SEARCH

TRIO FILE will also allow you to search for records using a PRIMARY and SECONDARY criteria. In other words, use two fields to find specific files. (Search for all the bakers in Dallas, for example).

To do this, press F5 to search. At the prompt ENTER ITEM FIELD NUMBER, you MUST enter FIVE CHARACTERS. So, if you want to search for all the bakers in Dallas, you have to enter 04+08. This means search field #4 (CITY) and field #8 (TYPE).

Then enter DALLAS when prompted for "CITY TO SEARCH" and enter BAKER when prompted for the "TYPE TO SEARCH." The program will eliminate everything from the search except bakers in Dallas.

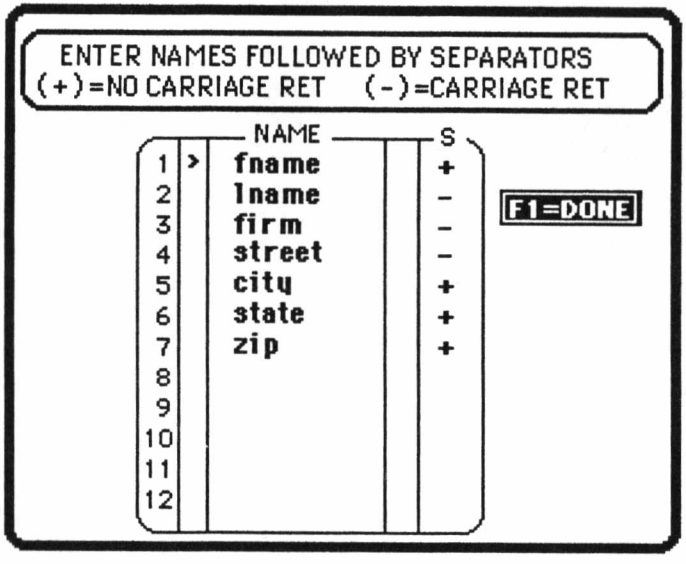
If you are not prompted to enter the second item, you've done something wrong in setting up the search. Remember, you must enter five characters to designate the fields in a secondary search.

PRINT FILES

If you press F6, you'll see the screen change. The empty field box is displayed. A message prompt says (+)=NO CARRIAGE RETURN and (-)=CARRIAGE RETURN.

Use these symbols for your printer set-up. Type in the fields you want to print and put a minus sign next to each field that you want printed on its own line and a plus sign next to the ones you want printed on the same line.

In our sample, if we wanted to print labels, the screen should look like this:



The fields **fname** and **lname** will be printed on the same line. Next **firm** and **street** will be printed on separate lines and **city, state** and **zip** will be printed on the same line.

When you accept the print format, the message line will ask how many spaces to skip between printing each RECORD. That means it will print a label and skip, say, three spaces before starting to print the next label. Experiment a little with this, and you'll get a feel for how many spaces you want.

Before you print, though, you will want to pick out whether you want to print all records or selective ones. Answer Y to print the whole file.

If you want to print selective files, answer N and go back to the SEARCH section (F5), turn on the print control and simply enter your search criteria. This is the same routine as the SEARCH MODE. Simply indicate the range in the field you want to search. As the RECORDS are found they will be sent to the printer.

THE HELP SCREENS

You have access to HELP SCREENS in TRIO FILE - just like in TRIO WORD and TRIO CALC. If you press the F8 key (SHIFT and F7), a window opens over your present screen. It has a number of options to choose from to give you answers to questions about TRIO FILE.

Remember: whenever you intend to use the HELP SCREENS, be sure to remove the file disk from the drive and replace it with the TRIO Master Disk. This is because the program loads the information from the Master Disk.

And when you finish, remember to switch disks again because if you add or search for records, the program will look for the data disk.

Basically, that covers TRIO FILE'S uses as a filing system. With it, you can create as many different types of file formats as you need.

TRIO FILE: A DEFINITION OF TERMS

Most of TRIO FILE's features are accessible using the FUNCTION KEYS on the right side of the keyboard. Their functions are displayed at the top of the screen as a reminder.

F1: ADD - ADD new RECORDS. The data disk must be in the drive.

The center of the screen will display your file format (as you set it up using F7) with the name of each field on the left and the area to add new RECORDS on the right. The file name and RECORD # is displayed at the top.

F2: EDIT - EDIT existing RECORDS. The data disk must be in the drive.

First you'll be asked if you want to use the Sort & Modify feature. Answer No to edit, Yes to use the feature.

In EDIT, the screen will display the same form as the ADD RECORD section. Pick the field you will search to find a RECORD and enter the information you are searching for.

If you want to DELETE the displayed RECORD, respond Y to the DELETE prompt or N to continue with the editing. (Don't press RETURN after the Y's and N's in this section.)

Using the CRSR key with the up and down arrows on it, move the > to the field you want to correct. Type in the new field information (which will appear below).

If it is correct, press RETURN and it will be entered into the field. When you have completed the corrections, press F1 and they will be recorded onto the disk.

To use the Sort & Modify, feature, answer Yes to the first question that appears when you press F2. Then put the TRIO disk back in the drive, and follow the instructions that appear. (Remember to switch back to your data disk once you actually want to sort or modify.)

F3: ACCESS - This function loads the format of your file into the computer, allowing you access to all records stored in the format. The DATA disk should be in the drive.

Press F3 and enter the name of the file you created. The drive will load and display the format and maximum length of each field. Now you can use the F1: ADD, F2: EDIT, F5: SEARCH or F6: PRINT sections to work with any RECORDS in the current file.

F4: COLORS - You can change the colors of the text or the background by pressing F4 (SHIFT and F3).

When you press F4, you can then use the F1 key to change the background colors and the F3 key to change the text.

F5: SEARCH - Find a record or range of records using this section.

You can set up a search criteria such as all the Names that begin with B or all files in the Zip Code area 22020. Or set up PRIMARY and SECONDARY search criteria by entering both fields with a plus sign (+) between them. You MUST ENTER FIVE CHARACTERS (i.e. 01+03).

F6: PRINT - This section configures the RECORDS to be printed out in any form.

Press F6 and the file format will be displayed. Using the right side of the display, you can specify (with the + and - signs) which fields will be printed and how they will appear on a label.

A MINUS sign means print the field on its own line. A PLUS sign means print the field on the same line as the next field.

A prompt allows you to enter the number of spaces to skip between printing RECORDS. For example, if you are printing four line labels, you may want to skip three spaces before printing the next label.

F7 : CREATE A FORM - This section allows you to create a new file form.

The number of RECORDS (or full entries) is limited only by the space remaining on your disk. However, the number of FIELDS (or categories within each record) cannot be over 17.

Press F7, and enter a FILE NAME. You will see a screen with 17 lines which represent the form your RECORD will take.

Name your first FIELD and then designate the maximum length of this field. (No field can hold more than 29 characters.)

Press RETURN, and repeat this procedure for all the other FIELDS you want in your RECORD.

The total number of characters in all the FIELDS cannot exceed 230.

F8: HELP - This will explain the operation of each section of the program. The Master Disk must be in the drive.

Pressing F8 (SHIFT and F7) stops the program and opens a window with many options for operating information. Choosing one will display it on screen.

When you are finished, the program will go back to the point you left off.

OTHER KEYS

CRSR KEYS - These keys, located next to the right SHIFT key, are used to move up and down the format screen to make corrections.

CTRL P: PRINTER SETTINGS - Change the Secondary Address, Device number and File number of your printer. This gives you the flexibility to use printers which require other specifications. You can also enter special printer codes (CHR$ or ASCII codes) for special printing effects such as boldface, underline or italics. These codes vary from printer to printer; consult your manual.

CTRL S: STOP (OR CANCEL) A FUNCTION -- Cancel a function and return to main screen.

CTRL D: DISK COMMANDS - Press the CTRL key and D. By entering F, the program will automatically format a new DATA disk for you (follow the prompts). Remember, formatting erases all information on a disk. Entering C allows you to change the name of a file. Entering $ displays the names of all the files on a disk.

COMMODORE KEY and Q: QUIT - Pressing the COMMODORE KEY and Q at any point will allow you to exit TRIO FILE and either load TRIO WORD or TRIO CALC.

INTEGRATING TRIO WORD AND TRIO FILE

Integration - the process of merging information together from the threedifferent programs - has already been demonstrated by using TRIO CALC files with TRIO WORD files.

Now that you are familiar with the operation of both TRIO WORD and TRIO FILE, we will demonstrate how to insert TRIO FILE information into TRIO WORD documents.

The best example of merging information together with these two programs is a personalized form letter. This is the kind of letter that refers to the person's name and, perhaps, address throughout the body of the letter.

To do this, you are going to use TRIO WORD's CLIPBOARD and the variable text definitions.

Load TRIO WORD as you normally would: LOAD "TRIO",8,1. Select 1 on the title page to load TRIO WORD.

Enter the number of lines you wish to allocate to the main text area -- 400 is best for this example.

CREATING A FORM LETTER

Normally you use the integration feature for merging data base information with a text document. The document may be a form letter, for example.

When you write the document, you can embed variable codes into the text, the same way you do when using the CLIPBOARD feature.

To illustrate how this integration process works, let's try an example that is already on the Master disk. Be sure your Master disk is in the drive and load "FORM LETTER" by using F6 and entering the file name.

You'll notice that this sample is a standard letter with variables already strategically placed in the body of the text. This is a letter used by a Sales Manager to award monthly prizes to sales people. The same letter goes to new people every month.

[CTRL] Vfname [CTRL] Vlname
[CTRL] Vstreet
[CTRL] Vcity, [CTRL] V state, [CTRL]V zip

Dear [CTRL] Vfname:

Thank you for your interest in our latest mouse trap.

You'll be pleased to know that, due to your sales efforts, the [CTRL] Vfirm was the highest grossing marketing firm for our product last month in [CTRL] Vstate.

As a result, I think the City of [CTRL] Vcity can rest assured that mice will be few and far between as a result of the Build A Better Mouse Trap.

We haven't overlooked your efforts here, [CTRL] Vfname. In gratitude, we have enclosed four tickets to Disneyworld for you and the [CTRL] Vlname family. I'm sure [CTRL] Vspouse will appreciate some time away.

Just be careful of one thing, [CTRL] Vfname. Don't let Mickey know you are the [CTRL] Vstate champion sales representative for Build A Better Mouse Trap.

Sincerely,

Bill McDouglas
Sales Manager

This letter really doesn't make too much sense unless you know what those CTRL V variable names stand for.

The TRIO FILE records used in this example are from a file called "the sample" that we created in the TRIO FILE instructions. As you recall, it had the following format:

FIELD	LENGTH
fname	10
lname	12
firm	20
street	15
city	10
state	10
zip	5
phone	14
type	10
memo	10
spouse	10
sales	8

You can use any name to define these fields -- just as you define or name blocks of text in the CLIPBOARD. It's just easier to remember what the variables stand for if you use the field names. Remember, TRIO WORD will only allow a six letter variable name.

Now that you have the standard letter composed with the VARIABLE names embedded into it, you can save it and use it every month to send the prize to the best sales person.

This process is nearly the same as using the CLIPBOARD feature except, rather than type in specific information, you will access it from the disk containing TRIO FILE records.

So the next thing you'll want to do is get records from TRIO FILE -- while this program is loaded up! Here's how it works.

First, remove the Master disk and insert the disk which has your TRIO FILE records on it-- that is the disk with "the sample" file on it.

(NOTE: If you didn't create the sample file in TRIO FILE, then leave the master disk in. We created the sample for you and put in on the master so you can simply access it as explained below. In fact, it already has a sample RECORD in it that will be used in the instructions.)

Press the CTRL key (remember the C at the right, bottom of the screen will be reversed) and the B key.

At the bottom of the screen, you'll be prompted to enter the name of the file you are storing all of your TRIO FILE records under.

This would be the title of a file that you normally enter when you want to ACCESS (F3) your records using TRIO FILE. For example, because we are using the sample we created earlier, it is on file under the name "the sample" -- that is the name you enter here.

The format of the TRIO FILE will be displayed on the TRIO WORD screen.

Now that you have the FILE format loaded into WORD, you can search and retrieve any record in your file. Once retrieved, you can integrate it into a document such as the sample one above.

```
F1 = ABORT (RETURN TO MAIN TEXT)
F3 = READ ALL RECORDS
F5 = SEARCH   F7 = DEFINE AS VARIABLE

01   fname    10
02   lname    12
03   firm     20
04   street   15
05   city     10
06   state    10
07   zip       5
08   phone    14
09   type     10
10   memo     10
11   spouse   10
12   sales     8
LOADING :        the sample        C
```

In addition, FOUR choices are given:

F1: ABORT ACTION
F3: READ WHOLE FILE
F5: SEARCH FILE
F7: CREATE VARIABLE DEFINITION

F1 ABORT ACTION: First, F1 lets you change your mind or stop searching when you find a file you want to insert into a document.

F3 READ WHOLE FILE: To read ALL the records on the file you have accessed, press F3. This will load and display each RECORD one at a time. Press C to continue viewing each RECORD or F1 to stop searching.

F5 SEARCH FILE: To search for a particular file or series of files, press the F5 key. This is how you will find a record that you will insert into a document.

You'll be prompted to enter the information you are looking for. Enter your search criteria at the bottom of the screen. This searches somewhat differently than the TRIO FILE program in that it will perform a general search of the files.If you entered "New York" as the search criteria, it would search ALL the fields for New York and display each record that had "New York" in it.

The program will search all the records in the drive until it finds the first one that meets the search criteria. Once you have found the record you want to insert into a document, you can press any key to stop searching for other files. (Press C to continue searching.)

Actually, in this sample case, we are seeking the sales person with the highest sales this month, so we'd actually find the record by looking at all the records (F3) and picking the one with the highest sales figure in field 12. If you used the sample file on the Master disk you would have found Billy Joe MacDonald's file which should be displayed now.

CREATE A VARIABLE

You have found the record you want to insert (i.e. Billy Joe MacDonald) into a document such as the sample letter above. Now you want to define each field as a variable.

To CREATE A VARIABLE DEFINITION, press F7. This will let you name any of the fields shown so they can be inserted throughout the form letter.

The cursor can be moved to any FIELD in the RECORD using the CRSR keys with the ARROWS. Move the cursor into the field you want to define as a variable. Press RETURN.

The message center will prompt you to name this VARIABLE. Type in any name (up to six characters) and press RETURN.

In our sample, press F7. The cursor will be flashing on the name Billy Joe. This is in the first field, called **fname** which is also the way it has been defined in the form letter. So press RETURN, type **fname** at the bottom of the screen and press RETURN again.

Go through this process as many times as you need to until you've defined all the variables that are in the letter. Press F7 again and move the cursor to the next line -- Mac Donald -- and define this as **lname** and press RETURN. And so on.

As you can see from the sample, we used the same names that were used to name the fields in TRIO FILE. You don't have to but it might be simpler this way to remember what each variable stands for. Any name or letter can be used for a variable name as long as it doesn't exceed six characters.

When you have finished defining the variables, press the F1 key in order to STOP this activity and clear out the record displayed. F1 will take you to the main text area where you can then insert those defined variables into the form letter.

But first, take a look at the CLIPBOARD, so you can see what happened to the information you defined as variables. Press CTRL Z to see the CLIPBOARD.

You will see all the information you defined is now on the CLIPBOARD. Each FIELD has a reverse type V and its variable name in front of it followed by the information.

```
TRIO WORD
YOU ARE ACCESSING THE CLIPBOARD
PRESS CTR Z TO RETURN TO MAIN TEXT

V fname=Billy Joe
V lname=Mac Donald
V firm=Mousebusters Company
V street=15 Broadway
V city=Brooklyn
V state=New York
V zip=11209
V spouse=Geraldine

LINE 001        COLUMN 01        C
```

Now, go back to the main text that is loaded -- Press CTRL and the Z keys. At this point you are ready to integrate the CLIPBOARD and the main text. Press CTRL and the I key (Integrate) and everything merges.

When the sample letter is filled in, you can print it out or save it as a new TRIO WORD file.

Once a record has been searched and placed into the CLIPBOARD, the process is exactly the same as using the CLIPBOARD normally in TRIO WORD.

Generally when you go to the effort to create a form letter or document of this type for multiple use, you will want to keep a copy of the letter on disk with the variables in it.

When you load it up and fill in the variables, you will still have the "original" on disk to use again and again. In order to do another letter using this same form, you have to clear the files on the main and CLIPBOARD screens. Then search for the next record you want to use and define the variables again.

A FINAL NOTE:

As you can see, TRIO has many, many features. You may not take advantage of all of them at once or some you may never even need.

The program and manual were designed so you would be able to use the essentials right away, and, as you familiarize yourself with the program, learn more about its finer points.

That, we hope, means that TRIO will grow according to your needs and become more useful to you on a daily basis.

DESIGNER NOTES:

TRIO is the result of the efforts of the following people:

KEN CURRIER, Vice President of Programming for Softsync, conceived the idea of an integrated package for the Commodore user. Because he believes that "a microprocessor is a microprocessor -- it's the programmer that counts," his goal was to create a program that met the standards of the best integrated software available for IBM's while remaining easy to use.

RUDOLPH DANIEL, Softsync Senior Programmer, is an award winning programmer who contributed greatly to TRIO, particularly due to his innovative data base design and file storage structure.

AL LAITY is a published software author who has written a wide variety of programs. He primarily created TRIO WORD, with a goal of writing a word processor with every possible feature.

PETER ULRICH, has a Ph.D. from Harvard University and is a research scientist at Rockefeller University. He has written a number of system utility programs for Softsync. He decided that TRIO CALC could be as sophisticated as any electronic spreadsheet available on IBM or Apple computers but actually simpler to use.

WARRANTY AND SERVICE POLICY

REPLACEMENT POLICY

If this disk should fail within 90 days of purchase, please return with proof of purchase for FREE replacement. After 90 days from date of purchase, please include $5 for replacement, plus $2.50 for postage and handling.

LIMITED WARRANTY

The software and manual are sold "AS IS", without warranty as to their performance. The entire risk as to the quality and performance of the software is assumed by the user. The user, and not SOFTSYNC or any dealer or distributor, assumes the entire cost of all necessary servicing, repair, or correction and any incidental or consequential damages.

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SOFTSYNC™ 162 Madison Ave. NY, NY 10016. 212-685-2080